LA-7343-MS

Informal Report

GJBX-41 '79

4-24-79

GEOLOGICAL SURVEY OF WYOMING

Geology
GJBX-(79)-41

**Uranium Hydrogeochemical and
Stream Sediment Reconnaissance of the
La Junta NTMS Quadrangle, Colorado,
Including Concentrations of
Forty-Three Additional Elements**

University of California

LOS ALAMOS SCIENTIFIC LABORATORY

Post Office Box 1663 Los Alamos, New Mexico 87545

metadc958294

An Affirmative Action/Equal Opportunity Employer

This work was supported by the US Department of Energy,
Division of Uranium Resources and Enrichment. Program Code B048.

This report was prepared as an account of work sponsored by the United States Government. Neither the United States nor the United States Department of Energy, nor any of their employees, nor any of their contractors, subcontractors, or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.

UNITED STATES
DEPARTMENT OF ENERGY
CONTRACT W-7408-ENG. 36

LA-7343-MS

Informal Report

Special Distribution

Issued: February 1979

**Uranium Hydrogeochemical
and Stream Sediment Reconnaissance of the
La Junta NTMS Quadrangle, Colorado,
Including Concentrations of
Forty-Three Additional Elements**

John D. Purson

Richard G. Warren

CONTENTS

LIST OF ILLUSTRATIONS	vi
LIST OF TABLES	vii
ABSTRACT	1
I. INTRODUCTION	2
II. DESCRIPTION OF STUDY AREA	2
Location and Geographic Setting	2
Climate	3
III. GEOLOGY	4
Hydrology	4
Stratigraphy	4
Structure	6
Uranium Occurrences	7
IV. PRESENTATION OF ANALYTICAL AND STATISTICAL DATA	8
Uranium Concentrations in Water Samples	10
Uranium Concentrations in Sediment Samples	13
V. SUMMARY AND CONCLUSIONS	15
ACKNOWLEDGMENTS	16
APPENDIX I	
Listings of Field Data and Elemental Concentrations for Samples from the La Junta NTMS Quadrangle, Colorado	17
I-A	
Listings of Field Data and Elemental Concentrations for Water Samples from the La Junta Quadrangle, Colorado	17
I-B	
Listings of Field Data and Elemental Concentrations for Sediment Samples from the La Junta Quadrangle, Colorado	73
APPENDIX II	
Histogram of Thorium Concentrations in Sediments from the La Junta Quadrangle, Colorado	127

APPENDIX III	Summary of Standard LASL HSSR Procedures and Explanation of Codes Used and Key to the Sample Types Listed in Appendix I	129
III-A	Summary of Standard LASL HSSR Field and Analytical Procedures	130
III-B	Explanation of Codes Used in Appendix I	135
III-C	Key to Sample Types Listed in Appendix I	139
REFERENCES CITED		140

LIST OF ILLUSTRATIONS

Fig. No.

1.	Location and drainage map for the La Junta NTMS quadrangle, Colorado.	3
2.	Generalized structure map of the La Junta quadrangle, Colorado.	6
3.	Schematic diagram showing clusters of samples having high uranium concentrations from the La Junta quadrangle, Colorado.	9
4.	Histograms and statistical data for uranium concentrations in water samples from the La Junta quadrangle, Colorado.	11
5.	Histograms and statistical data for uranium concentrations in sediment samples from the La Junta quadrangle, Colorado.	14

Plate No.

I.	Sample location overlay for the La Junta NTMS quadrangle, Colorado.	pocket
II.	Uranium concentrations (ppb) in waters--overlay to the La Junta NTMS quadrangle, Colorado.	pocket
III.	Conductivities ($\mu\text{mho/cm}$) in waters--overlay to the La Junta NTMS quadrangle, Colorado.	pocket
IV.	Uranium concentrations (ppm) in sediments--overlay to the La Junta NTMS quadrangle, Colorado.	pocket
V.	Thorium concentrations (ppm) in sediments--overlay to the La Junta NTMS quadrangle, Colorado.	pocket

LIST OF TABLES

Table No.

I. Principal Stratigraphic Units in the La Junta Quadrangle, Colorado	5
II. Reported Uranium Occurrences in the La Junta Quadrangle, Colorado	7
III. Clusters of Water Samples Having Uranium Concentrations >20 ppb from the La Junta Quadrangle, Colorado	12
IV. Clusters of Sediment Samples Having Uranium Concentrations >8 ppm from the La Junta Quadrangle, Colorado	13

URANIUM HYDROGEOCHEMICAL AND STREAM SEDIMENT RECONNAISSANCE
OF THE LA JUNTA NTMS QUADRANGLE, COLORADO,
INCLUDING CONCENTRATIONS OF FORTY-THREE ADDITIONAL ELEMENTS

by

John D. Purson and Richard G. Warren

ABSTRACT

The Los Alamos Scientific Laboratory conducted a reconnaissance for uranium in the La Junta NTMS quadrangle, Colorado, in the summer of 1977. Totals of 1351 water and 656 sediment samples were collected from 1832 locations. These samples were collected at an average density of one sample location per 11 km² over a 19 700-km² area. Water samples were collected from wells, streams, and springs; sediment samples were collected from streams and springs. For both water and sediment populations, clusters of samples containing approximately the highest 5% of the reported uranium values were chosen for discussion. These values were >20 parts per billion (ppb) for waters and >8 parts per million (ppm) for sediments.

The uranium concentrations in waters range from below the detection limit of 0.02 ppb to 748.40 ppb, with a mean uranium concentration for all water types of 7.22 ppb. Five clusters of samples containing relatively high uranium values are defined; they are associated with the Dakota sandstone-Purgatoire formations, the Morrison formation, or alluvium near the Arkansas River. The cluster associated predominantly with the Morrison formation has the most favorable lithologic and structural setting for possible uranium mineralization.

Sediments collected in this study have uranium concentrations that range between 1.60 ppm and 52.20 ppm, with a mean of 4.54 ppm. The majority of sediment samples with relatively high uranium concentrations were collected in four areas that are associated with either the Dakota-Purgatoire formations or the Graneros shale-Greenhorn limestone-Carlile shale formations. The cluster of samples containing the highest uranium values for sediments and the cluster containing the highest uranium values for waters are coincident and are located in the west-central portion of the quadrangle. This area appears most favorable for a more detailed study.

I. INTRODUCTION

This report describes the results of Hydrogeochemical and Stream Sediment Reconnaissance (HSSR) sampling within the area defined by the La Junta National Topographic Map Series (NTMS) quadrangle, Colorado, conducted by the Los Alamos Scientific Laboratory (LASL). The HSSR, a part of the National Uranium Resource Evaluation (NURE) sponsored by the US Department of Energy (DOE), is designed to identify areas that have higher than normal concentrations of uranium in groundwaters, surface waters, and water-transported sediments. The HSSR data will ultimately be combined with data from other NURE programs (e.g., from airborne radiometric surveys and geological investigations) to prepare an improved assessment of the potential uranium resources in the United States and to indicate areas favorable for uranium exploration by the private sector. The LASL is responsible for conducting the HSSR in the Rocky Mountain states of New Mexico, Colorado, Wyoming, and Montana, in the portions of NTMS quadrangles in these states that extend into Texas, Oklahoma, Arizona, Utah, and Idaho, and in Alaska.

Samples were collected by the Bendix Field Engineering Corporation (BFEC) during late summer 1977 from 1832 locations at an average density of one sample location per 11 km², and include 1351 water samples and 656 sediment samples. Wells are the primary source of water samples though some samples were collected from springs and streams. Dry streams are the dominant sediment source; additional sediments were collected from wet streams, wet springs, and dry springs. This report contains results of analyses for uranium and 12 other elements in waters and uranium and 42 other elements in sediments. However, only the uranium data will be discussed in this report.

II. DESCRIPTION OF STUDY AREA

Location and Geographic Setting

Boundaries of the La Junta quadrangle are 37° and 38°N latitude and 102° and 104°W longitude, encompassing an area of about 19 700 km² (Fig. 1). The quadrangle is located in the extreme southeastern corner of Colorado and includes a 4-km-wide strip of Kansas inside its eastern border.

The report area lies entirely within the Great Plains physiographic province of Fenneman (1931), which has been subdivided by the US Geological Survey (USGS, 1970) into two sections: the High Plains section in the eastern quarter of the quadrangle and the Rocky Mountain Piedmont section. The High Plains section is characterized by a nearly level plain occasionally dissected by intermittent streams, and the Rocky Mountain Piedmont is characterized by scattered buttes and mesas separated by moderately steep-sided valleys. Elevations range from 1006 m in the northeastern corner of the quadrangle to 2104 m at the highest point on Mesa de Maya near the south border. State highways and secondary roads provide good access to most parts of the study area.

The residence of the sparse population in this region is influenced by the availability of water, agricultural suitability, and transportation facilities. La Junta, Springfield, Walsh, and Prichett are the largest towns in the quadrangle (Fig. 1). Although the majority of the population is urban, the primary industries in the region are agriculture and ranching.

Natural vegetation in the High Plains consists largely of native grasses and cacti, and the Rocky Mountain Piedmont section supports native grasses, sagebrush, juniper, and pinon pine. The predominant land use is for grazing

Fig. 1. Location and drainage map for the La Junta NTMS quadrangle, Colorado.

of cattle and sheep, although agriculture has become increasingly important through modern farming techniques.

Climate

The La Junta quadrangle has a semiarid climate and a mean annual precipitation ranging from about 280 mm in the northwestern corner to about 450 mm in the southeastern corner. Maximum precipitation occurs from May through August and minimum precipitation from October through March. The temperatures are typical of a continental climate with warm summers averaging 25°C in July and cool winters averaging -0.5°C in January (NOAA, 1977).

The field sampling was done late in the summer of 1977, during and after the summer rainy season. Information regarding general weather conditions at each location at the time of sampling was recorded by the field personnel and is included in the data listings of Appendixes I-A and I-B.

III. GEOLOGY

The brief description of the principal stratigraphic units in the area given in Table I is taken from the geologic map (1:250 000 scale) of the La Junta quadrangle (Scott, 1968). The following discussion of the geology has been compiled primarily from McLaughlin (1954), Voegeli and Hershey (1965), Scott (1968), Baars (1972), and Pearl (1974).

Hydrology

Tributaries of the Arkansas River form the major drainage system in the La Junta quadrangle. Major tributaries are the Purgatoire and Cimarron Rivers and Two Butte Creek (Fig. 1).

The Arkansas River originates in mountainous central Colorado, flows through the northwestern corner of the La Junta quadrangle, and continues eastward just north of, and nearly parallel to, the 38°N latitude boundary of the quadrangle. Stream flow in its tributaries depends on precipitation and return flow from irrigation.

The principal groundwater reservoirs in the report area are Quaternary alluvium, the Tertiary Ogallala formation, and the Cretaceous Dakota and Lytle sandstones (McLaughlin, 1954; Voegeli and Hershey, 1965). Quaternary sediments along the Arkansas River yield water of poor chemical quality and it is rarely used as domestic supply; however, good quality water in adequate quantities is locally available in alluvium of major tributaries of the Arkansas. Water from the Ogallala formation is generally of good quality, whereas water from Cretaceous strata, though usually available, is of highly variable quality.

Stratigraphy

Within the La Junta quadrangle, Precambrian basement rock is overlain by Phanerozoic deposits of limestone, shale, sandstone, sand, and gravel ranging in thickness from about 600 m over the Las Animas arch to about 2100 m in the Anadarko basin (Fig. 2). The oldest exposed rocks within the area are of Permian age (Table I), although older rocks are known in the subsurface.

Lower Paleozoic subsurface rocks consist of thick Cambrian and Ordovician marine limestone and dolomite and a thin upper Devonian carbonate sequence with a maximum thickness of about 30 m (Baars, 1972). Early Permian rocks are also predominantly marine carbonates and are about 900 m thick. Late Permian units are composed of nonmarine red shale and sandstone, indicating withdrawal of the sea in the middle Permian (McLaughlin, 1954).

Erosion and deposition of continental sediments occurred in the early Mesozoic era. The late Triassic Dockum group consists of shales, sandstones, and small amounts of limestone. The Jurassic Entrada sandstone is eolian in origin, and the Morrison formation is composed of interbedded sandstones and mudstones. An unconformity separates the Triassic and Jurassic sections. The lithology of the Dockum and Morrison formations will be discussed further in a following section in relation to factors that might favor local concentration of uranium.

Cretaceous sediments are predominantly marine shales and sandstones and indicate deposition in an epicontinental sea. The Lytle sandstone member of the Purgatoire formation was deposited as the sea transgressed, preceding deposition of typical marine sediments that include the Graneros shale, Greenhorn limestone, Carlile shale, and Niobrara formation. The Fox Hills sandstone marks a regression of the sea and subsequent return of continental deposition resulting from the uplift of the Rocky Mountains. Following a

TABLE I

PRINCIPAL STRATIGRAPHIC UNITS IN THE LA JUNTA QUADRANGLE, COLORADO

Period	Thickness	Unit	Description
Quaternary	0-30 m	Alluvium	Gray, poorly sorted, stony sand and silt in flood-plains and low terraces. Mapped only along major streams where it does not obscure bedrock contacts.
		Dune sand	Yellowish-gray, medium-grained sand forming widespread dunes.
		Broadway alluvium	Yellowish-gray, stony, coarse-grained sand along Timpas Creek.
		Rocky Flats alluvium	Yellowish-brown, cobbly gravel 67 m above Arkansas River.
		Nussbaum alluvium	Yellowish-brown, bouldery gravel 122 m above Arkansas River.
Tertiary	0-5 m	Intrusive rocks	Dark-gray, finely crystalline dikes and plugs of olivine basalt that form ridges and knobs chiefly in the south-west part of the quadrangle.
	0-6 m	Extrusive rocks	Dark-gray, finely crystalline flows of olivine basalt containing upper scoriaceous parts and forming composite tabular bodies that locally are overlain by low, broad, cone-shaped flows at volcanic centers.
	0-80 m	Ogallala formation	-----UNCONFORMITY----- Chiefly sandy gravel containing granitic and sedimentary clasts; generally lacks volcanic rocks. Contains thin, hard algal limestone at top. Firmly cemented by caliche.
Cretaceous	6-235 m	Niobrara formation	-----UNCONFORMITY----- Smoky Hill shale member: yellowish-gray, fossiliferous, calcareous shale; platy limestone; and, in uppermost exposures, sandy shale. Fort Hays limestone member: yellowish-gray, ledge-forming, thick beds of fossiliferous limestone.
	26-65 m	Carlisle shale	Yellowish-brown, fossiliferous calcarenite; black shale containing large septarian concretions; and yellowish-brown, soft, bentonitic platy shale.
	20-50 m	Greenhorn limestone	Gray, platy-weathering, ledge-forming, fossiliferous limestone; dark-gray, calcareous, platy shale; and yellowish-gray, fossiliferous, ledge-forming beds of calcarenite and limestone.
	20-60 m	Graneros shale	Dark-gray, noncalcareous shale; contains orange Thatcher limestone member.
	23-72 m	Dakota sandstone	Yellowish-brown, cross-laminated, cliff-forming sandstone.
	12-104 m	Purgatoire formation	Glencairn shale member: fossiliferous, dark-gray, marine claystone, siltstone, and sandstone (laterally equivalent to Kiowa shale member). Lytle sandstone member: yellowish-brown, cross-laminated sandstone (laterally equivalent to Cheyenne sandstone member).
	-----UNCONFORMITY-----		
Jurassic	6-73 m	Morrison formation	Varicolored claystone, brown-weathering sandstone, and gray limestone.
		Ralston Creek formation	Greenish-gray claystone, gray limestone, red jasper, blue and pink agate, and lower local sandy beds containing pink alabaster and white gypsum.
		Entrada sandstone	White, massive, cross-laminated sandstone; contains minor copper deposits in southwest Baca County.
Triassic	0-174 m	Dockum group	-----UNCONFORMITY----- Reddish-brown, medium-grained sandstone; reddish-brown and grayish-yellow-green siltstone; and local gray limestone.
	27-60 m	Big Basin formation	Pale, reddish-brown, platy siltstone and fine-grained sandstone.
Permian	3-19 m	Day Creek dolomite	Grayish-orange-pink, finely crystalline, cross-laminated dolomite; locally in two or more beds separated by calcareous red siltstone.
	9-91 m	Whitehorse sandstone equivalent	Yellowish-gray to red fine-grained sandstone and shale.

From Scott, 1968.

Fig. 2. Generalized structure map of the La Junta quadrangle, Colorado.

period of erosion that removed the Fox Hills sandstone, the sandy gravels and thin limestones of the Ogallala formation were deposited in the middle Pliocene. Basaltic lava flows originating near the southern border of the quadrangle covered several small areas after deposition of the Ogallala.

Glacial sediments deposited during the Pleistocene have been largely removed by erosion during the Holocene. Silt and clay are currently being deposited by major rivers along present flood plains. Sand dunes, which formed during the late Pleistocene and Holocene, have generally been stabilized by vegetation.

Structure

The oldest structural feature within the area is the broad Las Animas arch (Fig. 2), which may be a northwest extension of the Sierra Grande arch in New Mexico. Gentle northeast dips of less than one-half degree characterize the bedding attitudes along the southeastern flank of the Las Animas arch. The arch appears to have been a weak, but persistently positive, structural element throughout much of geologic time and now forms part of the eastern margin of the Denver basin (Curtis, 1960).

The southeastern end of the Apishapa uplift extends into the western half of the La Junta quadrangle (Fig. 2). This uplift is a broad arch trending east-southeast that forms the structural divide between the Denver basin to the north and the Raton basin to the south. Most of the structural relief along the Apishapa arch resulted from formation of these basins in Laramide time. East of the Apishapa and Las Animas arches lies a shallow embayment of the Anadarko basin.

There are several significant monoclines but few major faults in the quadrangle. Most faults are shown on the La Junta geologic map and are post-Cretaceous in age with maximum displacements of about 60 m (Scott, 1968).

The Two Buttes laccolithic dome in Baca and Prowers Counties is another significant structure developed during the Cenozoic Era. The dome consists of syenitic lamprophyre and was probably emplaced during the late Oligocene or early Miocene (McLaughlin, 1954).

Uranium Occurrences

The presence of uranium has been recognized at five locations within the La Junta quadrangle (Table II). Occurrences 1 through 3 are claims in the vicinity of Ninaview in rocks of Jurassic and Cretaceous ages. The uranium minerals present are unknown, but occurrence 1 has been described as a "radio-active shale" (BFEC, written communication). Near these locations, two stream water samples have also been reported to contain high uranium concentrations (BFEC, written communication). They came from the junction of Muddy and Rule Creeks and the Wiltshire-Acton Ranch and have uranium concentrations of 28 parts per billion (ppb) and 50 ppb, respectively. Occurrences 4 and 5 are claims located in Cretaceous age rocks near the western edge of the study area

TABLE II

REPORTED URANIUM OCCURRENCES IN THE LA JUNTA QUADRANGLE, COLORADO

<u>Occurrence Name</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Remarks</u>
1. G. R. Acton Property	37°38'N	103°18'W	Located 5 km west of Ninaview in Morrison formation.
2. Mikes Mine	37°38'N	103°09'W	Located 2.6 km east of Ninaview in sandstone of Purgatoire formation.
3. Allen Jones Property	37°39'N	103°10'W	Old copper prospect in Morrison formation.
4. Booster Claim No. 1	37°21'N	103°55'W	On north side of Van Bremer Arroyo at contact of Dakota sandstone with Purgatoire formation.
5. Cliff Martin Claims	37°18'N	103°56'W	In Luning Canyon at contact of Dakota sandstone with Purgatoire formation.

From Nelson-Moore et al, 1978.

where the radioactivity is associated with groundwater seeps near the base of the Dakota sandstone.

Uranium deposits in the Morrison formation are thought to be related to lithologies where the sandstone-to-shale ratio is near one (Trimble and Doelling, 1977). This formation is in the subsurface throughout most of the La Junta quadrangle; however, favorable lithology for uranium mineralization is found only in the west-central area (Peterson, 1972). In addition to this favorable host lithology, a potential source of uranium in the area is evidenced by thick bentonite beds within the Morrison formation near Ninaview (Mardirosian, 1976). The decomposition of tuff to form bentonite and the subsequent leaching and downward migration of uranium-enriched groundwater is a possible mechanism for the formation of uranium deposits in the Morrison (Adler, 1974). The favorability of this area is further supported by occurrences 1 and 3 (Table II), which are a few kilometers from the bentonite beds. The Triassic Dockum group also has a favorable sandstone-to-shale ratio in the west-central area (MacLachlan, 1972).

Minor pre-Laramide tectonism is believed to have significantly affected deposition of the Morrison formation in the Grants Mineral Belt in the Colorado Plateau and might account for the uranium mineralization in the Poison Canyon, Ambrosia, and Jackpile trends (Saucier, 1976). Similarly, Hawley et al (1968) suggest that the uranium deposits in the Triassic Chinle formation near the San Rafael swell in Utah may have been localized by tectonic structures due to their relation to minor folds. In the La Junta quadrangle, the intersection of the Las Animas arch with the Apishapa arch, in an area where the lithology is favorable for uranium mineralization, may provide similar structural controls to localize deposition of uranium.

Commercial uranium deposits occur both in carbonaceous shale and sandstone at the base of the Cretaceous Dakota sandstone in northwestern New Mexico (Gabelman, 1955). The Dakota sandstone contains ore-grade uranium associated with carbonaceous shales and sandstones in several areas of the Colorado Plateau (Gabelman, 1955). Uranium has also been produced from the Dakota sandstone in the Black Hills district in South Dakota (Gott et al, 1974). Equivalent units in the La Junta quadrangle might host similar type deposits.

The majority of the "preferred" radiometric anomalies reported by Texas Instruments, Inc., (1978) and shown in Fig. 3 are associated with either the Dockum group, the Morrison formation, or the Dakota-Purgatoire formations, further indicating that these may be favorable units for uranium occurrence.

IV. PRESENTATION OF ANALYTICAL AND STATISTICAL DATA

Only the analytical results for uranium are treated herein. Analytical data for uranium and 12 additional elements in water are found in Appendix I-A and for uranium, thorium, and 41 additional elements in sediments in Appendix I-B. Field data taken at each sample site, including pH and conductivity measurements for waters, are also found in Appendix I. A histogram of the thorium concentrations in sediment samples is presented in Appendix II. Descriptions of the sample collection procedures, the analytical methods employed by the LASL, and the codes to the data listings of Appendix I are contained in Appendix III. Plates included in the rear pocket consist of a sample location overlay (Plate I), a uranium concentration overlay for waters (Plate II), a conductivity overlay for waters (Plate III), a uranium concentration overlay for sediments (Plate IV), and a thorium concentration overlay for sediments

Fig. 3. Schematic diagram showing clusters of samples having high uranium concentrations from the La Junta quadrangle, Colorado.

(Plate V). All overlays are at a 1:250 000 scale so they can be used in conjunction with both the topographic map (USGS, 1955) and geologic map (Scott, 1968) of the La Junta quadrangle.

Several methods have been used to evaluate the uranium concentrations reported in previous HSSR studies (e.g., Bolivar et al, 1978; Sharp and Hill, 1978). In this report, a "cluster" is defined as a group of samples from an area of similar geology from which a substantial portion of the samples have relatively high uranium values: >20 ppb for waters and >8 parts per million (ppm) for sediments. These values are within the concentration ranges of the largest two symbols on Plates II and IV and were selected to include approximately the highest 5% of the reported uranium concentrations. The clusters are shown in Fig. 3 and are itemized in Table III for waters and Table IV for sediments. Although this discussion will be limited to these clusters and their geologic setting, the possible significance of high uranium concentrations in samples from isolated locations or groups of samples having lower concentrations than those chosen for discussion should not be discounted. It should be stressed that there are numerous factors such as topography,

hydrology, and geochemistry that may influence correct interpretation of reconnaissance geochemical data (Grimbert and Loriod, 1968).

Uranium Concentrations in Water Samples

A total of 1351 water samples was collected from 1168 wells, 143 springs, and 40 streams in the La Junta quadrangle. Histograms and basic statistical data are shown for all waters combined and for individual sample types in Fig. 4. Uranium concentrations for all waters range from below the detection limit of 0.02 ppb to 748.40 ppb and have a mean of 7.22 ppb.

Eighty-one of the 1351 water samples contain uranium concentrations >20 ppb and 66 of these fall into five clusters (Fig. 3 and Table III). All of these clusters contain at least one sample having a uranium value >50 ppb as well as several having values between 10 ppb and 20 ppb.

Cluster W1 contains eight well samples that were collected near the Arkansas River. These high uranium values are similar to those found in other water samples taken along the Arkansas River in the adjacent Lamar quadrangle and thought to be related to floodplain alluvium or the Niobrara formation (Shannon, 1979).

The largest cluster, W2, occurs in the west-central portion of the La Junta quadrangle. This cluster contains 37 water samples that have >20 ppb uranium, but also includes a much larger number of samples that have <20 ppb uranium. The highest uranium values within this cluster can be identified in Table III. Most of these samples are from wells having depths that indicate sources in the Morrison formation or adjacent stratigraphic units. The three water samples in this cluster containing >200 ppb uranium are from adjacent well locations near Villegreen; the water with the highest uranium content, 748.40 ppb, has a pH of 4.0. Four of the five uranium occurrences in the quadrangle are within this cluster and are in outcrops of the Morrison formation or the Dakota-Purgatoire formations. About half of the airborne radiometric anomalies in the La Junta quadrangle are also associated with this cluster (Fig. 3). Within the area defined by water cluster W2, a sandstone-to-shale ratio of approximately one (Peterson, 1972) and the structural intersection of the Laramide Apishapa arch and pre-Laramide Las Animas arch (Fig. 2) provide a suitable setting for economic uranium deposits within the Morrison formation.

The smallest cluster, W3, contains two well samples with >20 ppb uranium and several that contain 10 ppb to 20 ppb. These samples are from an area overlain by the Dakota-Purgatoire formations.

Cluster W4 consists of 12 water samples with >20 ppb; two springs and several wells appear to tap aquifers in the Dakota-Purgatoire formations. The Ogallala formation, a principal water-bearing unit, seems to be very thin in this area and probably is not tapped. The area is just south of Two Buttes Dome, which might provide a source for uranium mineralization (Texas Instruments, Inc., 1978).

Cluster W5 is located at the eastern edge of the quadrangle and contains five wells with uranium concentrations >20 ppb. The well depths for two of these indicate that water is drawn from a unit stratigraphically beneath the Purgatoire formation.

The only water sample that has a uranium value above 50 ppb and is not contained in a cluster is from sample location C31800. It contains 67.80 ppb uranium and is from the margin of the Arkansas River valley in the northeastern corner of the quadrangle, in an area geologically similar to that of Cluster W1. Three airborne radiometric anomalies in the northeastern corner of the quadrangle (Fig. 3) are near this sample location.

a. All waters

b. Spring waters

c. Stream waters

d. Well waters

Fig. 4. Histograms and statistical data for uranium concentrations in water samples from the La Junta quadrangle, Colorado.

TABLE III

CLUSTERS OF WATER SAMPLES HAVING URANIUM CONCENTRATIONS >20 ppb
FROM THE LA JUNTA QUADRANGLE, COLORADO

<u>Water Cluster^a</u>	<u>Sample Location^b</u>	<u>Well Depth (ft)^c</u>	<u>Uranium (ppb)</u>	<u>General Remarks</u>	<u>Water Cluster^a</u>	<u>Sample Location^b</u>	<u>Well Depth (ft)^c</u>	<u>Uranium (ppb)</u>	<u>General Remarks</u>
W1	C30031	68	97.30	Mostly shallow wells tapping alluvium in Arkansas River valley.	W2 (cont.)	C30612	150	31.65	
	C30032	60	40.80			C30615	150	86.30	
	C30033	50	33.47			C30618	150	371.90	
	C30034	50	27.15			C30619	350	39.40	
	C30035	50	30.45			C30624	100	238.10	
	C30041	40	54.20			C30642	60	34.31	
	C30042	40	30.45			C30651	150	79.30	
	C30047	150	24.64			C30673	200	22.73	
W2				Wells in this cluster tap water primarily from the Morrison formation. A few appear to originate in the Dockum group and the Dakota sandstone.					
	C30155	100	35.70			C30696	100	28.17	
	C30269	150	20.50			C30750	200	25.70	
	C30276	Unknown	26.78		W3	C31197	35	170.50	
	C30278	150	25.39			C31198	Unknown	23.63	
	C30287	120	72.20		W4				
	C30289	Unknown	21.55			C31025	Unknown	49.60	
	C30349	100	66.40			C31057	100	25.63	
	C30350	100	27.82			C31059	Unknown	25.50	
	C30364	70	23.77			C31084	Unknown	117.00	
	C30406	Unknown	45.10			C31103	Spring	197.20	
	C30408	Unknown	54.80			C31136	Unknown	36.29	
	C30435	175	37.90			C31415	Unknown	51.00	
	C30467	325	46.81			C31418	Unknown	35.50	
	C30475	150	93.50			C31425	Unknown	23.71	
	C30486	Spring	21.28			C31427	268	23.45	
	C30488	100	27.82			C31428	Unknown	30.00	
	C30510	Spring	20.30			C31429	63	34.40	
	C30513	100	38.80			C31549	Spring	76.00	
	C30543	Unknown	20.68			C31569	Unknown	27.80	
	C30544	Unknown	45.30		W5				
	C30561	150	39.70			C31589	Unknown	25.97	
	C30583	150	96.20			C31590	Unknown	28.50	
	C30593	150	34.92			C31593	149	50.35	
	C30594	75	26.54			C31609	70	25.90	
	C30596	200	43.70			C31832	Unknown	62.20	
	C30603	200	748.40						
	C30606	200	65.90						

^a The locations of water clusters are shown in Fig. 3.

^b Each sample location is listed in Appendix I-A and plotted on Plate II.

^c Well depth taken from Appendix I-A or McConaghy and Colburn (1964).

Uranium Concentrations in Sediment Samples

A total of 656 sediment samples was collected from 481 streams and 175 springs in the area. Field conditions at the time many of the streams were sampled inhibited the collection or filtration of the corresponding water samples and often only a wet stream sediment was taken. Histograms and basic statistical data for sediments are shown by sample type in Fig. 5. There are five

TABLE IV

CLUSTERS OF SEDIMENT SAMPLES HAVING URANIUM CONCENTRATIONS >8 ppm
FROM THE LA JUNTA QUADRANGLE, COLORADO

<u>Sediment Cluster^a</u>	<u>Sample Location^b</u>	<u>Sample Type</u>	<u>Uranium (ppm)</u>	<u>U/Th Ratio</u>	<u>General Remarks</u>
S1	C31032	Wet Stream	10.70	1.22	Samples in this cluster are associated with shales and limestones of Cretaceous age.
	C31086	Dry Stream	8.30	0.27	
	C31103	Wet Spring	8.80	0.48	
	C31104	Wet Spring	9.00	0.71	
	C31218	Wet Spring	10.00	0.94	
	C31256	Wet Spring	10.80	0.75	
	C31387	Wet Stream	10.00	0.85	
S2	C30352	Wet Spring	10.20	0.80	These samples are from locations in or near the Dakota sandstone-Purgatoire formations.
	C30460	Wet Spring	8.10	0.64	
	C30476	Wet Spring	52.20	10.24	
	C30491	Wet Spring	18.10	0.94	
	C30510	Wet Spring	12.50	1.07	
	C30515	Wet Spring	29.40	2.97	
	C30608	Wet Spring	17.40	1.38	
	C30609	Wet Spring	9.20	0.53	
	C30626	Wet Spring	9.50	0.34	
S3	C30629	Wet Stream	18.50	1.67	These samples are from locations in or near the Dakota sandstone-Purgatoire formations.
	C30729	Wet Spring	9.40	0.90	
	C30738	Wet Stream	12.00	1.03	
	C30757	Wet Stream	16.00	1.25	
	C30758	Wet Spring	8.60	0.52	
	C30866	Wet Stream	11.10	0.98	
	C30890	Wet Spring	8.50	0.80	
	C31483	Wet Spring	11.30	0.50	
	C31507	Dry Stream	8.10	0.44	
S4	C31519	Dry Stream	11.40	0.51	Samples in this cluster are from locations where the Dakota sandstone is exposed in stream beds.
	C31432	Wet Spring	10.40	0.18	
	C31555	Wet Spring	8.40	0.71	
	C31573	Wet Spring	10.00	0.23	
	C31581	Wet Stream	9.70	0.15	
	C31583	Dry Stream	12.60	0.13	

^a The locations of sediment clusters are shown in Fig. 3.

^b Each sample location is listed in Appendix I-B and plotted on Plate IV.

a. All sediments

b. Wet spring sediments

c. Dry stream sediments

d. Wet stream sediments

Fig. 5. Histograms and statistical data for uranium concentrations in sediment samples from the La Junta quadrangle, Colorado.

dry spring samples, given the same treatment as other sediments, which are not shown separately in Fig. 5 but are listed in Appendix I-B as sample type "99". Uranium concentrations for all sediments range from 1.60 ppm to 52.20 ppm and have a mean of 4.54 ppm.

About 5% (35 out of 656) of the sediment samples contain uranium concentrations >8 ppm and 31 of these fall into four clusters (Fig. 3 and Table IV). All of these clusters also contain samples with uranium values between 5 ppm and 8 ppm. Additional groups of sediment samples that only contain between 5 ppm and 8 ppm uranium can also be identified by inspection of Plate V.

Cluster S1 is located in the north-central portion of the quadrangle. With the exception of two wet spring sediments, probably derived from the Dakota formation, all uranium values >8 ppm are associated with the Graneros shale-Greenhorn limestone-Carlile shale formations. Uranium contents between 5 ppm and 8 ppm are found in sediments from an area at the west-central edge of the quadrangle, which is also underlain by these formations. Since shales that have a high organic content are generally enriched in uranium (Swanson, 1955), the high uranium contents of sediments from these areas may simply reflect the presence of black shales.

The sediment samples that have the highest uranium concentrations occur in the west-central (cluster S2) and the south-central (cluster S3) portions of the La Junta quadrangle. Cluster S2 coincides with an area of high uranium values in waters (cluster W2) and also contains the only two sediments from the quadrangle containing >20 ppm uranium. Sediments in this cluster exhibit high U/Th ratios, up to 10.24 (Table IV). Almost all samples from the areas of clusters S2 and S3 are associated with the Dakota-Purgatoire formations, although a few are found in the Morrison formation.

Cluster S4 is located in the east-central portion of the quadrangle in an area overlain predominantly by the Ogallala formation. However, all sediment samples with uranium values >5 ppm within this cluster are in drainages that have cut through the Ogallala formation and exposed the underlying Dakota-Purgatoire formations.

V. SUMMARY AND CONCLUSIONS

Totals of 1351 water and 656 sediment samples were collected from 1832 locations over the 19 700-km² area of the La Junta quadrangle at an average density of one sample location per 11 km². Water samples were collected from wells, springs, and streams and together have a mean uranium content of 7.22 ppb and a range of <0.02 ppb to 748.40 ppb. Sediment samples were collected from streams and springs and together have a mean uranium content of 4.54 ppm and a range of 1.60 ppm to 52.20 ppm. Samples containing approximately the highest 5% of the reported uranium concentrations are discussed. Uranium values for such water and sediment samples are >20 ppb and >8 ppm, respectively.

Sixty-six of the 81 water samples containing >20 ppb uranium fall into five clusters. Two of the clusters are associated with the Dakota-Purgatoire formations and one (cluster W2) with the Morrison formation where wells commonly tap aquifers in an area where the lithology and structure are favorable for possible uranium mineralization. Wells in the other water clusters tap aquifers either below the Dakota-Purgatoire formations or in alluvium near the Arkansas River.

Thirty-one of the 35 sediment samples containing >8 ppm uranium fall into four clusters. These clusters are associated with either the Dakota-Purgatoire formations or the Graneros shale-Greenhorn limestone-Carlile shale formations. The cluster in the north-central portion of the quadrangle is associated with a shale and limestone unit, and the high uranium values there may result from uraniferous black shales. Cluster S2 in the west-central portion of the quadrangle contains the highest sediment uranium values, is adjacent to four uranium occurrences, and coincides with cluster W2, which contains samples with the highest uranium values in water. Several aerial radiometric anomalies are also within cluster S2. The remaining two clusters are located in areas where the Dakota-Purgatoire formations crop out.

In conclusion, lithologic and structural features provide favorable conditions for sandstone-type uranium deposits in the west-central portion of the La Junta quadrangle. Some of the well waters in this area that have high uranium values originate in the Morrison formation, a known host for uranium mineralization. In the same area, the Dakota-Purgatoire formations provide high-uranium sediments, suggesting that these units might also be suitable hosts for uranium mineralization. Further investigation in the west-central portion of the quadrangle seems justified.

Lastly, a more thorough evaluation of the data may identify additional areas that might be associated with possible uranium or base-metal mineralization. However, such an evaluation and use of all elemental data listed in Appendix I are left to the reader.

ACKNOWLEDGMENTS

All samples were collected by personnel of Bendix Field Engineering Corporation, Grand Junction, Colorado. Sincere appreciation is expressed to the landowners who granted access to the lands under their control so that the survey could be completed.

The support and assistance of the following LASL groups and individuals are gratefully acknowledged. Nearly all water uranium analyses and x-ray fluorescence and emission spectrometry of sediment samples were performed by the Analytical Chemistry Group, CMB-1, directed by Glenn R. Waterbury. Fluorometric water analyses were performed by William H. Ashley and William E. George, emission spectrographic water analyses by Charles T. Apel, sediment x-ray fluorescence analyses by William F. Zelezny, and sediment emission spectrographic analyses by David W. Steinhau. All delayed-neutron counting and neutron activation analyses were performed by Michael M. Minor, Walter K. Hensley, Steven L. Stein, and James S. Bergauer of the Research Reactor Group, P-2, under the direction of Merle E. Bunker. Carlotta McInteer and D. June Pirtle of the Statistics Group, S-1, carried out the data management and computer graphics. Several members of the Geochemical Applications Group, G-5, were instrumental in producing this report: Nancy J. Sedlacek and Maxine L. Vigil typed and edited the text, Mary Ann Olson prepared the illustrations, and Wayne A. Morris, Paul L. Aamodt, and Stephen L. Bolivar reviewed the manuscript.

APPENDIX I

LISTINGS OF FIELD DATA AND ELEMENTAL CONCENTRATIONS FOR SAMPLES FROM THE LA JUNTA NTMS QUADRANGLE, COLORADO

APPENDIX I-A

Listings of Field Data and Elemental Concentrations For Water Samples from the La Junta Quadrangle, Colorado (Pages 18 through 71)

Note that two pages, numbered ① and ② in the upper right hand corner, are necessary to provide the complete data listing for each numerically ordered sequence of samples.

- ① - Lists field data and uranium concentrations determined by fluorometry.
- ② - Lists concentrations of 12 additional elements determined by plasma-source emission spectrography.

(See Appendix III for Codes to Listings)

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS. SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.7886-102.1281-2-08-						0-C30001	79191	-55	-25	9	79	17778	7	-25	-25	-200	-4	165	
08-37.7892-102.1842-2-08-						0-C30002	94004	74	-25	12	126	20391	9	-25	-25	-200	10	229	
08-37.7869-102.2042-2-08-						0-C30003	130000	82	-25	9	205	29275	9	-25	-25	-200	7	193	
08-37.8067-102.2411-2-06-						0-C30004	181000	123	-25	8	89	44559	640	-25	-25	-200	15	132	
08-37.8003-102.2225-2-08-						0-C30005	94535	98	-25	5	116	18033	15	-25	-25	-200	-4	55	
08-37.8056-102.1561-2-08-						0-C30006	104000	79	-25	8	58	22497	6	-25	-25	-200	11	-50	
08-37.8372-102.1819-2-08-						0-C30007	102000	-55	-25	8	84	33359	18	-25	-25	-200	-4	89	
08-37.8553-102.2103-2-08-						0-C30008	78991	-55	-25	6	69	18631	8	-25	-25	-200	5	136	
08-37.8522-102.2264-2-08-						0-C30011	146000	99	-25	13	108	27600	9	-25	-25	-200	12	331	
08-37.8125-102.2917-2-08-						0-C30012	169000	116	-25	7	73	34189	38	-25	-25	-200	13	101	
08-37.8361-102.2900-2-08-						0-C30013	168000	123	-25	7	87	53478	11	-25	-25	-200	10	623	
08-37.8028-102.2947-2-08-						0-C30014	68195	-55	-25	153	47	19667	-3	-25	-25	-200	-4	212	
08-37.8161-102.3128-2-08-						0-C30015	74413	65	-25	126	68	17916	13	-25	-25	-200	6	187	
08-37.8508-102.3286-2-08-						0-C30016	119000	96	-25	14	89	33321	15	-25	-25	-200	13	374	
08-37.8744-102.3433-2-08-						0-C30017	88291	100	-25	59	72	27705	-3	-25	-25	-200	5	441	
08-37.8375-102.3517-2-08-						0-C30018	84621	-55	-25	95	51	21133	6	-25	-25	-200	14	273	
08-37.7903-102.3697-2-08-						0-C30019	110000	86	-25	49	72	32716	7	-25	-25	-200	13	416	
08-37.7664-102.3397-2-08-						0-C30021	71554	76	-25	108	83	17615	12	-25	-25	-200	-4	142	
08-37.7583-102.2681-2-08-						0-C30022	85343	103	-25	72	46	25102	7	-25	-25	-200	-4	352	
08-37.8586-102.2631-2-08-						0-C30023	119000	118	42	17	58	31733	18	-25	72	-200	17	339	
08-37.9972-103.9489-2-08-						0-C30024	29534	-55	-25	-4	141	16704	37	-25	-25	-200	-4	-50	
08-37.8803-103.9033-2-08-						0-C30025	323000	235	-25	-4	49	70795	-3	-25	-25	-200	19	198	
08-37.8869-103.9783-2-08-						0-C30026	276000	176	-25	-4	39	66832	30	-25	-25	-200	19	156	
08-37.9309-103.7633-2-08-						0-C30027	23988	-55	-25	-4	8457	22408	59	-25	-25	-200	-4	104	
08-37.9531-103.7811-2-08-						0-C30028	8625	-55	-25	-4	2124	9841	309	-25	-25	-200	-4	-50	
08-37.8986-103.8214-2-08-						0-C30029	76924	83	-25	-4	17272	56485	210	-25	-25	-200	-4	-50	
08-37.8992-103.8667-2-08-						0-C30030	40359	-55	-25	-4	14055	30628	60	-25	-25	-200	-4	97	
08-37.9553-103.7250-2-08-						0-C30031	527000	411	-25	-4	156	170000	16	-25	140	-200	43	334	
08-37.9642-103.7200-2-08-						0-C30032	453000	328	-25	-4	98	135000	9	-25	107	-200	43	215	
08-37.9503-103.7361-2-08-						0-C30033	484000	356	-25	-4	111	188000	7	-25	118	-200	41	245	
08-37.9894-103.6544-2-08-						0-C30034	525000	362	-25	-4	128	132000	10	-25	349	-200	72	251	
08-37.9814-103.6281-2-08-						0-C30035	474000	447	-25	-4	163	298000	16	-25	382	-200	81	296	
08-37.9469-103.6350-2-08-						0-C30036	337000	258	-25	-4	799	100000	17	-25	101	-200	32	226	
08-37.8833-103.6947-2-08-						0-C30037	117000	138	-25	-4	31	44648	-3	-25	-25	-200	17	107	
08-37.8950-103.6850-2-08-						0-C30038	160000	181	-25	-4	57	50477	6	-25	63	-200	23	5422	
08-37.9081-103.6750-2-08-						0-C30039	110000	132	-25	-4	84	52411	33	-25	-25	-200	12	795	
08-37.9169-103.6667-2-08-						0-C30040	298000	285	-25	-4	537	78234	14	-25	83	-200	36	248	
08-37.9822-103.5953-2-08-						0-C30041	484000	434	-25	-4	146	138000	43	-25	425	-200	80	208	
08-37.9997-103.5858-2-08-						0-C30042	453000	447	-25	-4	107	141000	196	-25	395	-200	77	224	
08-37.9931-103.5258-2-08-						0-C30043	245000	265	-25	-4	81	98671	4354	-25	205	-200	45	137	
08-37.9994-103.5131-2-08-						0-C30044	297000	276	-25	-4	87	107000	371	-25	104	-200	30	172	
08-37.9969-103.5453-2-08-						0-C30045	279000	356	-25	-4	154	86335	2529	-25	350	-200	54	184	
08-37.9594-103.6203-2-08-						0-C30046	73599	126	-25	-4	91	30798	99	-25	76	-200	17	85	
08-37.9394-103.6144-2-08-						0-C30047	447000	525	-25	-4	1013	184000	39	-25	709	-200	110	858	
08-37.9214-103.5703-2-08-						0-C30048	59075	140	50	-4	77	23063	11	62	232	-200	35	140	
08-37.9242-103.5906-2-08-						0-C30049	50882	152	-25	-4	117	56254	11	67	167	-200	26	87	
08-37.9056-103.5717-2-08-						0-C30050	112000	187	41	-4	173	29698	14	-25	240	-200	40	1386	
08-37.8986-103.5750-2-08-						0-C30051	115000	244	-25	-4	840	34619	17	31	209	-200	46	89	
08-37.8806-103.5311-2-08-						0-C30053	132000	332	-25	-4	501	163000	52	146	654	-200	87	250	
08-37.9975-103.4192-2-08-						0-C30056	7479	-55	-25	-4	545	2724	23	-25	-25	-200	-4	118	
08-37.8981-103.4264-2-08-						0-C30057	42181	77	-25	-4	14240	43012	220	61	115	-200	17	1409	

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.9289-103.4994-2-06-			0-C30058			237000		302	165	-4	234	29185	30	82	614	-200	97	293	
08-37.9572-103.4953-2-08-			0-C30060			27504		66	-25	-4	6687	36239	55	84	183	-200	24	357	
08-37.9072-103.3814-2-08-			0-C30061			51251		111	-25	-4	12911	46915	101	99	195	-200	22	245	
08-37.9297-103.3861-2-08-			0-C30063			72097		129	-25	-4	799	60434	73	130	247	-200	37	4744	
08-37.9919-103.3847-2-08-			0-C30064			11621		-55	32	-4	72	12896	75	85	188	-200	26	136	
08-37.9503-103.3600-2-08-			0-C30065			13920		70	77	-4	2207	14916	40	167	313	274	59	179	
08-37.9658-103.3650-2-08-			0-C30066			14351		-55	65	-4	10391	17283	54	149	316	-200	40	1860	
08-37.9667-103.3422-2-08-			0-C30067			9194		-55	-25	-4	290	16047	7	48	48	-200	6	119	
08-37.9614-103.2792-2-06-			0-C30069			150000		253	-25	-4	119	105000	14	155	413	-200	72	316	
08-37.9000-103.2942-2-06-			0-C30071			65161		104	47	-4	37	9542	539	176	252	-200	34	127	
08-37.8822-103.3353-2-08-			0-C30073			49841		109	27	-4	5170	26487	109	178	264	-200	36	207	
08-37.9833-103.2714-2-08-			0-C30076			20761		-55	-25	-4	5962	12903	48	55	60	-200	15	694	
08-37.8806-103.2722-2-08-			0-C30077			100000		181	-25	-4	3248	93465	91	121	290	-200	48	1300	
08-37.8881-103.3639-2-08-			0-C30078			52669		100	-25	-4	14093	45641	105	94	244	-200	34	262	
08-37.9975-103.1258-2-08-			0-C30079			86852		174	-25	-4	11476	78020	194	155	351	-200	47	763	
08-37.9958-103.1628-2-08-			0-C30080			44693		82	-25	-4	57	50057	9	112	241	-200	39	155	
08-37.9511-103.2311-2-08-			0-C30082			43609		127	-25	-4	5638	44456	136	123	-25	-200	13	124	
08-37.9281-103.1600-2-08-			0-C30083			61595		180	-25	-4	5801	76710	1276	138	121	-200	28	626	
08-37.9350-103.2031-2-08-			0-C30084			46314		121	-25	-4	60031	46634	697	189	253	-200	21	131	
08-37.9394-103.2322-2-08-			0-C30085			52967		161	-25	-4	15411	51652	167	229	230	-200	35	90	
08-37.9072-103.2275-2-08-			0-C30086			93599		167	-25	-4	3378	57404	82	-25	28	-200	9	110	
08-37.9264-103.1975-2-08-			0-C30087			103000		124	-25	-4	45608	53718	690	-25	143	-200	8	160	
08-37.8847-103.1403-2-08-			0-C30088			246000		193	-25	-4	184	45497	10	-25	153	-200	32	388	
08-37.8819-103.1583-2-08-			0-C30089			641000		486	111	-4	340	153000	24	-25	1072	-200	151	465	
08-37.9906-103.1978-2-08-			0-C30090			13709		-55	-25	-4	73	28317	-3	203	-25	-200	-4	-50	
08-37.8753-103.2456-2-08-			0-C30091			113000		120	-25	-4	173	73984	57	-25	-25	-200	8	303	
08-37.8608-103.1344-2-08-			0-C30092			179000		150	-25	-4	136	37133	4	-25	119	-200	22	452	
08-37.9500-103.0167-2-08-			0-C30093			293000		242	-25	-4	163	71064	7	-25	266	-200	50	304	
08-37.9253-103.0175-2-08-			0-C30095			272000		217	-25	-4	153	63407	6	-25	244	-200	40	364	
08-37.9144-103.0283-2-08-			0-C30096			237000		232	-25	-4	139	69102	5	-25	162	-200	34	334	
08-37.8922-103.0206-2-08-			0-C30097			335000		255	-25	-4	292	74819	17	-25	441	-200	73	333	
08-37.9808-103.1228-2-08-			0-C30098			290000		308	-25	-4	4659	175000	272	-25	162	-200	29	393	
08-37.9658-103.1172-2-08-			0-C30099			198000		166	-25	-4	1769	88642	57	-25	147	-200	81	317	
08-37.9914-103.0478-2-08-			0-C30100			177000		219	-25	-4	3189	75821	52	-25	348	-200	58	261	
08-37.9978-103.0314-2-08-			0-C30101			170000		229	-25	-4	2685	86975	42	-25	218	-200	36	304	
08-37.9836-103.0139-2-08-			0-C30102			300000		275	-25	-4	200	97179	12	-25	321	-200	55	353	
08-37.9461-103.0514-2-08-			0-C30103			155000		164	-25	-4	697	55807	38	-25	246	-200	35	1641	
08-37.9025-103.0703-2-08-			0-C30105			279000		279	-25	-4	222	167000	15	-25	222	-200	46	337	
08-37.9461-103.1075-2-08-			0-C30106																
08-37.8503-103.8822-2-08-			0-C30107			1118000		427	-25	-4	1504	166000	56	-25	657	-200	105	443	
08-37.8219-103.8883-2-08-			0-C30108			148000		95	-25	-4	19129	63677	245	-25	72	-200	12	87	
08-37.8042-103.8944-2-08-			0-C30109			137000		102	-25	-4	21590	55675	244	-25	44	-200	8	94	
08-37.7761-103.9861-2-06-			0-C30112			669000		401	30	-4	228	135000	25	-25	734	-200	109	283	
08-37.8231-103.9794-2-08-			0-C30113			381000		250	-25	-4	152	79340	6	-25	280	-200	50	310	
08-37.8392-103.9261-2-08-			0-C30114			361000		231	-25	-4	666	76306	28	-25	106	-200	31	380	
08-37.8222-103.8578-2-08-			0-C30115			239000		234	-25	-4	4928	94365	101	-25	388	-200	62	148	
08-37.8389-103.8197-2-08-			0-C30116			162000		112	-25	-4	17531	74618	164	-25	69	-200	11	121	
08-37.8208-103.8014-2-08-			0-C30118			177000		174	-25	-4	260	68271	50	-25	341	-200	51	195	
08-37.8647-103.8008-2-08-			0-C30119			193000		173	-25	-4	14103	88469	142	-25	180	-200	30	114	
08-37.7533-103.8011-2-06-			0-C30122			488000		288	-25	-4	197	79062	103	-25	276	-200	53	230	
08-37.7881-103.7811-2-08-			0-C30123			56693		132	-25	-4	13850	32932	608	-25	-25	-200	-4	145	

[illegible]

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.7886-103.7494-2-08-			0-C30125			102000	174	-25	-4	25640	54044	183	-25	104	-200	7	288		
08-37.8194-103.7208-2-08-			0-C30126			35981	116	-25	-4	6560	21738	52	-25	-25	-200	-4	74		
08-37.8517-103.6991-2-08-			0-C30127			218000	226	-25	-4	1286	53268	57	-25	181	-200	29	1567		
08-37.8294-103.6936-2-08-			0-C30129			66176	187	-25	-4	10670	39717	115	-25	97	-200	-4	242		
08-37.8392-103.6767-2-08-			0-C30132			13355	111	-25	-4	1469	22725	54	-25	-25	-200	5	132		
08-37.7964-103.7106-2-08-			0-C30133			215000	221	-25	-4	29158	43017	376	-25	179	-200	18	267		
08-37.8439-103.6361-2-08-			0-C30136			243000	277	-25	-4	345	92007	13	-25	178	-200	27	255		
08-37.8219-103.6033-2-08-			0-C30139			193000	229	-25	-4	129	24257	8	-25	191	-200	18	188		
08-37.8019-103.6011-2-08-			0-C30141			276000	252	-25	-4	201	50738	22	-25	168	-200	27	632		
08-37.7681-103.5973-2-08-			0-C30142			85424	128	-25	-4	4527	46138	275	-25	74	-200	23	664		
08-37.7750-103.5669-2-08-			0-C30143			122000	194	-25	-4	10791	53648	94	-25	119	-200	7	242		
08-37.7533-103.5400-2-08-			0-C30144			166000	196	-25	-4	18139	63096	346	-25	119	-200	11	199		
08-37.7775-103.5122-2-08-			0-C30146			70691	155	-25	-4	2130	41238	141	-25	-25	-200	-4	136		
08-37.7608-103.5144-2-06-			0-C30147			92292	110	-25	-4	127	8261	8	-25	-25	-200	-4	92		
08-37.8181-103.5108-2-08-			0-C30148			44936	86	-25	-4	16249	25430	109	-25	-25	-200	-4	83		
08-37.8508-103.5917-2-08-			0-C30149			114000	175	-25	-4	5258	49256	70	-25	-25	-200	-4	205		
08-37.8425-103.5739-2-08-			0-C30150			181000	194	-25	-4	131	36888	20	-25	-25	-200	-4	156		
08-37.8517-103.5333-2-08-			0-C30151			77234	145	-25	-4	16809	43700	471	-25	-25	-200	-4	685		
08-37.7856-103.4847-2-08-			0-C30154			392000	265	54	-4	204	43898	18	-25	379	-200	56	95		
08-37.7739-103.4567-2-08-			0-C30155			555000	453	-25	-4	281	244000	30	-25	366	-200	57	245		
08-37.7711-103.4289-2-08-			0-C30156			77837	131	-25	-4	422	18884	28	-25	-25	-200	-4	279		
08-37.7639-103.4047-2-08-			0-C30157			30698	101	-25	-4	248	9772	12	-25	98	-200	19	-50		
08-37.7517-103.4767-2-08-			0-C30158			531000	364	-25	-4	317	158000	23	-25	278	-200	46	296		
08-37.7914-103.4050-2-08-			0-C30160			173000	188	-25	-4	667	103000	50	-25	-25	-200	22	775		
08-37.8672-103.4544-2-08-			0-C30162			58093	-55	-25	-4	175	14087	9	-25	-25	-200	-4	-50		
08-37.8692-103.4956-2-08-			0-C30163			40858	136	-25	-4	96	46546	5	-25	-25	-200	-4	101		
08-37.8367-103.4575-2-08-			0-C30164			78844	166	-25	-4	167	35617	96	-25	61	-200	5	297		
08-37.8675-103.4086-2-08-			0-C30166			95985	164	-25	-4	144	70981	4	-25	-25	-200	-4	221		
08-37.8050-103.4478-2-08-			0-C30168			120000	171	-25	-4	17356	69329	346	-25	97	-200	8	191		
08-37.8056-103.4678-2-08-			0-C30169			100000	157	-25	-4	20586	58778	159	-25	159	-200	7	5175		
08-37.8669-103.3267-2-06-			0-C30170			48243	90	-25	-4	182	3380	108	-25	-25	-200	-4	91		
08-37.8386-103.3386-2-06-			0-C30171			64066	70	-25	-4	68	14946	8	-25	113	-200	15	-50		
08-37.8642-103.2931-2-08-			0-C30172			5779	76	-25	-4	613	3937	21	32	101	-200	8	80		
08-37.8597-103.2547-2-08-			0-C30173			24785	85	-25	-4	10528	17583	220	-25	-25	-200	-4	-50		
08-37.8189-103.2653-2-08-			0-C30174			13708	-55	-25	-4	767	7385	149	-25	60	-200	-4	-50		
08-37.8214-103.3133-2-07-			0-C30175			176000	186	-25	-4	169	26972	26	-25	94	-200	11	79		
08-37.8108-103.2961-2-06-			0-C30176			76395	128	-25	-4	241	12369	363	-25	-25	-200	-4	55		
08-37.7981-103.3083-2-06-			0-C30177			34849	67	-25	-4	148	1737	17	-25	32	-200	-4	-50		
08-37.7864-103.3033-2-08-			0-C30178			7912	95	-25	-4	557	2138	7	-25	-25	-200	-4	54		
08-37.7903-103.2769-2-08-			0-C30179			6440	65	-25	-4	203	3749	9	-25	53	-200	-4	-50		
08-37.7581-103.2814-2-08-			0-C30181			207000	202	-25	-4	157	82802	21	-25	210	-200	24	152		
08-37.7636-103.3039-2-08-			0-C30182			10179	-55	-25	-4	654	5225	23	62	94	-200	9	-50		
08-37.8025-103.3244-2-08-			0-C30183			3971	80	-25	-4	184	1505	8	34	130	-200	5	532		
08-37.7803-103.3453-2-08-			0-C30184			124000	176	-25	-4	215	34433	8	-25	34	-200	-4	188		
08-37.7661-103.3708-2-06-			0-C30185			121000	181	-25	-4	194	75649	73	-25	163	-200	16	95		
08-37.8381-103.2136-2-08-			0-C30187			9983	-55	-25	-4	486	5032	18	39	137	-200	16	-50		
08-37.8375-103.2258-2-08-			0-C30188			11326	71	-25	-4	-25	5377	4	342	56	-200	-4	-50		
08-37.7761-103.1450-2-08-			0-C30190			59521	84	-25	-4	-25	4204	-3	-25	-25	-200	-4	-50		
08-37.7747-103.1253-2-08-			0-C30191			218000	309	-25	-4	2234	219000	1982	-25	540	-200	29	622		
08-37.7547-103.1525-2-08-			0-C30192			243000	238	-25	-4	70	48126	15	-25	218	-200	42	354		
08-37.8097-103.1725-2-08-			0-C30194			401000	318	-25	-4	114	104000	13	-25	331	-200	52	282		

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

①

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																								U CONCENTRATION					
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SCINTILOMETER (cpd, ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (H) UNITS IN ppb	
							DATE	HOUR																											
08-37.7694-103.1942-2-08-						0-C30195-09/16/77-17-			27-15.2-	-	-	6.0-	2200-		11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.14	
08-37.7958-103.1889-2-08-						0-C30197-09/16/77-17-			27-13.0-	-	-	6.4-	2540-		0-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.83	
08-37.8706-103.1583-2-08-						0-C30198-09/17/77-9-			-14.1-	-	-	7.0-	7000-		27-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.83	
08-37.8325-103.1206-2-08-						0-C30199-09/17/77-11-			24-16.6-C-	-	-	-	1700-		13-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.92	
08-37.8036-103.1047-2-08-						0-C30200-09/17/77-11-			26-15.9-C-	-	-	-	2480-		13-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.52	
08-37.8258-103.0128-2-08-						0-C30203-09/18/77-11-			28-20.3-C-	-	-	-	2200-		13-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.22	
08-37.8039-103.0017-2-08-						0-C30205-09/18/77-11-			-	-	-	-	1700-		11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
08-37.8103-103.0361-2-08-						0-C30206-09/18/77-15-			29-	-	-	-	1720-		11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15	
08-37.7972-103.0222-2-08-						0-C30207-09/18/77-16-			29-	-	-	-	2100-		2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.45	
08-37.7322-103.9250-2-08-						0-C30208-09/18/77-11-			27-32.6-C-	-	7.4-	-	960-		6-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.83	
08-37.7294-103.9925-2-06-						0-C30209-09/18/77-14-			28-17.2-C-	-	7.3-	-	1810-		5-1-2-5-6-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.46	
08-37.7350-103.9814-2-08-						0-C30210-09/18/77-14-			28-20.5-C-	-	7.3-	-	1250-		-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.13	
08-37.7475-103.9936-2-06-						0-C30211-09/18/77-15-			29-26.5-C-	-	7.6-	-	700-		5-1-8-5-6-1-2-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.03	
08-37.6792-104.0000-2-08-						0-C30212-09/18/77-16-			31-15.8-C-	-	7.3-	-	1310-		6-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.93	
08-37.6611-103.9906-2-08-						0-C30213-09/18/77-16-			31-17.2-C-	-	8.0-	-	900-		11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20	
08-37.6728-103.9469-2-08-						0-C30214-09/18/77-17-			30-17.8-C-	-	7.4-	-	1100-		8-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20	
08-37.6458-103.9675-2-08-						0-C30217-09/18/77-18-			27-17.8-C-	-	7.3-	-	1000-		15-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.30	
08-37.6886-103.9075-2-06-						0-C30219-09/19/77-9-			25-21.5-C-	-	-	-	890-		10-1-2-5-6-1-2-4-1-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.40	
08-37.6289-103.9419-2-08-						0-C30220-09/19/77-13-			27-18.0-C-	-	7.3-	-	1750-		6-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.81	
08-37.7233-103.8644-2-08-						0-C30221-09/18/77-10-			27-16.0-C-	-	7.4-	-	1650-		15-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.34	
08-37.6742-103.8558-2-08-						0-C30223-09/19/77-16-			27-16.5-C-	-	7.4-	-	1200-		9-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.39	
08-37.7406-103.8375-2-08-						0-C30224-09/19/77-17-			27-19.6-C-	-	7.4-	-	1780-		13-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.31	
08-37.7250-103.8206-2-06-						0-C30225-09/19/77-18-			28-27.5-C-	-	7.4-	-	1500-		7-1-7-5-6-2-1-1-2-2-3-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.45	
08-37.7056-103.8197-2-06-						0-C30226-09/19/77-18-			27-26.0-C-	-	7.4-	-	750-		6-1-1-5-6-1-2-4-2-4-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.61	
08-37.6253-103.7661-2-08-						0-C30227-09/21/77-17-			30-17.3-C-	-	7.2-	-	1240-		6-1-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.36	
08-37.7456-103.7692-2-08-						0-C30230-09/22/77-9-			26-14.5-C-	-	6.8-	-	1750-		10-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.27	
08-37.7089-103.7925-2-06-						0-C30232-09/22/77-11-			29-24.5-C-	-	7.6-	-	900-		5-1-1-5-6-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.64	
08-37.6878-103.7897-2-08-						0-C30233-09/22/77-12-			29-21.0-C-	-	7.5-	-	1750-		7-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.44
08-37.6722-103.7514-2-08-						0-C30235-09/22/77-12-			30-21.6-C-	-	6.7-	-	2450-		5-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49
08-37.7489-103.7478-2-08-						0-C30236-09/22/77-10-			26-19.5-C-	-	6.8-	-	1900-		8-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.78
08-37.7083-103.7339-2-08-						0-C30237-09/22/77-10-			27-17.5-C-	-	6.6-	-	2250-		6-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.97
08-37.6689-103.7253-2-06-						0-C30238-09/22/77-13-			30-19.8-C-	-	7.5-	-	790-		5-1-8-4-6-2-2-1-2-1-2-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.07	
08-37.6700-103.7172-2-08-						0-C30239-09/22/77-13-			30-20.5-C-	-	6.7-	-	2700-		4-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.45
08-37.7311-103.6386-2-08-						0-C30241-09/22/77-14-			31-18.5-C-	-	6.8-	-	2100-		6-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
08-37.7453-103.6658-2-08-						0-C30242-09/22/77-15-			32-21.2-C-	-	7.2-	-	1600-		6-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
08-37.7356-103.7264-2-06-						0-C30245-09/23/77-16-			30-29.5-C-	-	8.2-	-	950-		5-1-1-5-6-1-2-4-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54	
08-37.6828-103.6378-2-08-						0-C30246-09/23/77-13-			32-26.5-C-	-	7.1-	-	2100-		5-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.45
08-37.6400-103.6233-2-08-						0-C30248-09/23/77-18-			31-17.2-C-	-	7.3-	-	1800-		5-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.34
08-37.6875-103.6189-2-08-						0-C30249-09/23/77-13-			31-18.0-C-	-	7.7-	-	2300-		8-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.35
08-37.6692-103.5983-2-06-						0-C30251-09/24/77-12-			30-28.0-C-	-	7.4-	-	250-		4-1-7-4-6-1-2-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.27	
08-37.7172-103.5911-2-06-						0-C30252-09/24/77-13-			34-24.5-C-	-	6.9-	-	2900-		4-1-2-6-8-1-3-5-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.00
08-37.7386-103.5758-2-08-						0-C30254-09/24/77-14-			33-15.0-C-	-	6.6-	-	1900-		8-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23
08-37.7203-103.5572-2-06-						0-C30255-09/24/77-15-			33-26.5-C-	-	7.3-	-	600-		5-1-7-5-6-1-2-4-2-2-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.52	
08-37.7214-103.5303-2-08-						0-C30256-09/24/77-15-			30-15.8-C-	-	7.1-	-	2200-		5-1-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.87
08-37.7253-103.5053-2-08-						0-C30257-09/25/77-18-			32-24.8-C-	-	-	-	4410-		4-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.45
08-37.6375-103.5675-2-08-		</																																	

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.7694-103.1942-2-08-			0-C30195			410000	326	-25	-4	307	68164	50	-25	229	-200	38	405		
08-37.7958-103.1889-2-08-			0-C30197			19185	82	-25	-4	185	9611	34	-25	-25	-200	-4	272		
08-37.8706-103.1583-2-08-			0-C30198			494000	331	-25	-4	159	170000	37	-25	256	-200	52	544		
08-37.8325-103.1206-2-08-			0-C30199			154000	217	-25	-4	70	54156	5	-25	209	-200	19	283		
08-37.8036-103.1047-2-08-			0-C30200			323000	242	-25	-4	249	87711	11	-25	119	-200	32	372		
08-37.8258-103.0128-2-08-			0-C30203			415000	273	-25	-4	148	85700	12	-25	319	-200	55	2379		
08-37.8039-103.0017-2-09-			0-C30205			309000	216	-25	-4	114	81860	11	-25	96	-200	24	729		
08-37.8103-103.0361-2-08-			0-C30206			339000	267	-25	-4	419	74735	531	-25	353	-200	51	1497		
08-37.7972-103.0222-2-08-			0-C30207			301000	289	-25	-4	140	89765	12	-25	256	-200	49	383		
08-37.7322-103.9250-2-08-			0-C30208			77242	143	-25	-4	9886	31270	298	-25	113	-200	8	771		
08-37.7294-103.9925-2-06-			0-C30209			274000	199	-25	-4	128	35931	11	-25	256	-200	27	309		
08-37.7350-103.9814-2-08-			0-C30210			133000	141	31	-4	13316	45751	416	-25	310	-200	43	877		
08-37.7475-103.9936-2-06-			0-C30211			122000	131	52	-4	109	11495	9	-25	206	-200	24	220		
08-37.6792-104.0000-2-08-			0-C30212			157000	180	-25	-4	3564	53460	89	-25	195	-200	22	224		
08-37.6611-103.9906-2-08-			0-C30213			17796	83	-25	-4	53	9051	14	-25	74	-200	-4	94		
08-37.6728-103.9469-2-08-			0-C30214			134000	129	-25	-4	13679	42103	104	-25	246	-200	27	213		
08-37.6458-103.9675-2-08-			0-C30217			121000	127	-25	-4	14422	36155	122	-25	72	-200	26	224		
08-37.6886-103.9075-2-06-			0-C30219			186000	161	38	-4	120	15610	4	-25	205	-200	28	217		
08-37.6289-103.9419-2-08-			0-C30220			178000	207	-25	-4	3277	76672	78	-25	258	-200	35	541		
08-37.7233-103.8644-2-08-			0-C30221			270000	272	-25	-4	220	50052	12	-25	259	-200	32	332		
08-37.6742-103.8558-2-08-			0-C30223			203000	211	-25	-4	4608	51896	48	-25	239	-200	27	1872		
08-37.7406-103.8375-2-08-			0-C30224			132000	165	-25	-4	12593	74566	190	-25	-25	-200	20	118		
08-37.7250-103.8206-2-06-			0-C30225			291000	200	35	-4	80	32282	21	-25	231	-200	37	104		
08-37.7056-103.8197-2-06-			0-C30226			146000	131	-25	-4	142	11431	40	-25	-25	-200	6	-50		
08-37.6253-103.7661-2-08-			0-C30227			153000	130	-25	-4	43	44658	13	-25	107	-200	16	734		
08-37.7456-103.7692-2-08-			0-C30230			139000	173	-25	-4	23159	69312	281	-25	98	-200	13	1920		
08-37.7089-103.7925-2-06-			0-C30232			108000	98	-25	-4	115	15209	49	-25	59	-200	10	169		
08-37.6878-103.7897-2-08-			0-C30233			214000	182	30	-4	109	35638	8	-25	229	-200	36	103		
08-37.6722-103.7514-2-08-			0-C30235			171000	166	-25	-4	87651	142000	1476	-25	259	-200	17	283		
08-37.7489-103.7473-2-08-			0-C30236			122000	144	-25	-4	6430	63129	105	-25	-25	-200	-4	173		
08-37.7083-103.7339-2-08-			0-C30237			130000	-55	-25	-4	31847	221	227	-25	-25	-200	-4	5755		
08-37.6689-103.7253-2-06-			0-C30238			142000	97	-25	-4	137	23366	-3	-25	186	-200	23	-50		
08-37.6700-103.7172-2-08-			0-C30239			149000	124	-25	-4	59576	126000	679	-25	188	-200	22	3873		
08-37.7311-103.6386-2-08-			0-C30241			104000	119	-25	-4	23264	54986	208	-25	206	-200	29	64		
08-37.7453-103.6658-2-08-			0-C30242			129000	139	-25	-4	9930	61087	281	-25	144	-200	15	200		
08-37.7356-103.7264-2-06-			0-C30245			98605	94	-25	-4	92	17724	25	-25	139	-200	16	170		
08-37.6828-103.6378-2-08-			0-C30246			311000	182	-25	-4	9933	59093	224	-25	300	-200	42	248		
08-37.6400-103.6233-2-08-			0-C30248			132000	120	-25	-4	118	43655	-3	-25	181	-200	28	633		
08-37.6875-103.6189-2-08-			0-C30249			351000	292	-25	-4	149	78453	12	-25	413	-200	56	2535		
08-37.6692-103.5983-2-06-			0-C30251			34393	61	-25	-4	185	1640	4	-25	-25	-200	-4	75		
08-37.7172-103.5911-2-06-			0-C30252			294000	230	-25	-4	89	100000	111	-25	171	-200	26	223		
08-37.7386-103.5758-2-08-			0-C30254			182000	179	-25	-4	7062	54969	135	-25	182	-200	39	169		
08-37.7203-103.5572-2-06-			0-C30255			102000	68	-25	-4	68	6189	6	-25	-25	-200	-4	54		
08-37.7214-103.5303-2-08-			0-C30256			166000	162	-25	-4	678	64607	100	-25	56	-200	10	129		
08-37.7253-103.5053-2-08-			0-C30257			38159	93	34	-4	64	7424	4	-25	145	-200	18	-50		
08-37.6375-103.5675-2-08-			0-C30258			424000	338	-25	-4	249	156000	8	-25	650	-200	94	405		
08-37.6278-103.5333-2-06-			0-C30259			156000	123	-25	-4	76	126000	-3	-25	324	-200	43	140		
08-37.6428-103.4572-2-08-			0-C30262			98156	104	-25	-4	192	63621	-3	-25	156	-200	38	99		
08-37.6739-103.4181-2-08-			0-C30268			294000	239	41	-4	97	61854	-3	-25	369	-200	59	623		
08-37.6289-103.4814-2-08-			0-C30269			120000	-55	-25	-4	67	32801	-3	-25	-25	-200	15	98		
08-37.6914-103.4608-2-08-			0-C30270			39303	-55	-25	-4	85	7232	-3	-25	-25	-200	8	189		

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS. SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.7414-103.4289-2-08-	0-C30271	448000	342	26	-4	109	120000	13	-25	567	-200	89	2939						
08-37.7100-103.4036-2-08-	0-C30272	63761	-55	-25	-4	67	32870	-3	30	205	-200	28	-50						
08-37.7261-103.3950-2-08-	0-C30273	99391	-55	-25	-4	53	18815	34	-25	-25	-200	5	272						
08-37.7219-103.3206-2-06-	0-C30274	27657	-55	-25	-4	675	2727	55	-25	72	-200	-4	-50						
08-37.7358-103.3106-2-08-	0-C30275	14192	-55	-25	-4	143	11931	11	67	95	-200	8	-50						
08-37.6775-103.3461-2-08-	0-C30276	316000	270	96	-4	262	57682	6	-25	558	-200	76	321						
08-37.7078-103.2894-2-08-	0-C30278	337000	268	-25	-4	205	108000	9	-25	502	-200	71	392						
08-37.6825-103.3192-2-08-	0-C30279	556000	441	-25	-4	180	131000	13	-25	606	-200	94	309						
08-37.6383-103.2586-2-08-	0-C30283	530000	414	204	-4	186	96680	14	-25	1090	-200	145	315						
08-37.7033-103.3625-2-08-	0-C30285	187000	158	-25	-4	430	171	91	-25	-25	-200	23	117						
08-37.7361-103.3311-2-08-	0-C30286	47186	71	-25	-4	78	22872	25	-25	114	-200	11	-50						
08-37.7378-103.3458-2-08-	0-C30287	136000	120	-25	-4	52	45076	17	-25	97	-200	22	2146						
08-37.6264-103.1422-2-08-	0-C30288	246000	201	-25	-4	-25	90076	9	-25	-25	-200	27	154						
08-37.6556-103.1583-2-08-	0-C30289	94632	114	-25	-4	116	85468	11	-25	111	-200	17	61						
08-37.6650-103.1481-2-08-	0-C30291	95878	243	-25	-4	105	405000	30	-25	53	-200	14	235						
08-37.7453-103.1569-2-08-	0-C30294	91094	126	110	-4	82	37436	33	-25	462	-200	52	257						
08-37.7089-103.1547-2-08-	0-C30295	76685	132	-25	-4	111	67442	7	-25	133	-200	15	435						
08-37.6875-103.1975-2-08-	0-C30296	161000	204	-25	-4	79	139000	10	-25	276	-200	38	186						
08-37.6531-103.2386-2-08-	0-C30298	604000	384	266	-4	216	87988	17	-25	1044	-200	132	377						
08-37.6769-103.2406-2-08-	0-C30300	171000	259	298	-4	67	56259	9	108	1080	-200	113	85						
08-37.7097-103.2397-2-08-	0-C30301	301000	271	-25	-4	70	128000	11	-25	530	-200	68	265						
08-37.7458-103.2369-2-08-	0-C30302	7884	64	74	-4	186	4951	29	83	234	371	27	196						
08-37.6328-103.2328-2-08-	0-C30303	234000	232	68	-4	53	72086	10	-25	444	-200	56	228						
08-37.7458-103.0939-2-08-	0-C30304	25813	58	-25	-4	-25	20804	61	134	130	-200	12	-50						
08-37.7361-103.0222-2-08-	0-C30305	383000	352	39	-4	146	181000	28	-25	893	-200	109	302						
08-37.6761-103.0128-2-08-	0-C30307	98389	157	-25	-4	36237	63308	2440	-25	448	-200	36	114						
08-37.6744-103.0597-2-08-	0-C30309	84199	154	89	-4	3822	28517	266	-25	389	-200	36	241						
08-37.6875-103.0678-2-08-	0-C30310	18342	107	101	-4	490	12422	32	72	298	-200	31	-50						
08-37.6706-103.0911-2-08-	0-C30311	193000	224	101	-4	44	79066	15	-25	594	-200	65	126						
08-37.6411-103.0544-2-08-	0-C30312	65997	379	111	-4	131000	27195	222	27	976	-200	32	1757						
08-37.6394-103.0836-2-08-	0-C30313	103000	199	117	-4	427	41563	16	-25	505	-200	55	211						
08-37.6983-103.1147-2-08-	0-C30317	149000	220	134	-4	83	40524	13	-25	565	-200	67	217						
08-37.5381-103.9422-2-08-	0-C30318	226000	290	53	-4	91	77702	21	-25	448	-200	59	217						
08-37.6022-103.9636-2-08-	0-C30321	76896	195	56	-4	24583	43397	324	-25	400	-200	34	200						
08-37.5875-103.8544-2-08-	0-C30329	112000	248	-25	-4	13849	81484	294	-25	353	-200	32	769						
08-37.5258-103.8406-2-08-	0-C30332	181000	326	118	-4	68815	59326	808	-25	930	-200	57	4516						
08-37.5472-103.8222-2-06-	0-C30334	187000	364	-25	-4	8911	112000	3625	-25	708	-200	55	557						
08-37.6083-103.8081-2-06-	0-C30335	93055	165	135	-4	63	8575	16	-25	444	-200	38	-50						
08-37.6150-103.7858-2-06-	0-C30336	65692	151	106	-4	1003	6236	28	-25	320	-200	47	-50						
08-37.5853-103.7647-2-06-	0-C30339	65230	130	93	-4	113	7420	312	-25	349	-200	25	-50						
08-37.5939-103.6381-2-08-	0-C30345	134000	166	106	-4	78	35724	12	-25	455	-200	48	420						
08-37.5217-103.6497-2-08-	0-C30346	471000	361	226	-4	161	76698	26	-25	1009	-200	108	581						
08-37.5439-103.6306-2-08-	0-C30347	591000	419	281	-4	333	110000	27	-25	1272	-200	137	352						
08-37.5481-103.5192-2-08-	0-C30348	299000	308	132	-4	1842	102000	277	-25	818	-200	85	255						
08-37.5461-103.5469-2-08-	0-C30349	10264	100	-25	-4	-25	9089	9	-25	-25	-200	-4	51						
08-37.5311-103.5619-2-08-	0-C30350	404000	372	-25	-4	106	129000	22	-25	138	-200	17	2964						
08-37.5664-103.5028-2-06-	0-C30352	44113	151	-25	-4	159	10127	388	-25	-25	-200	-4	102						
08-37.5636-103.5764-2-06-	0-C30353	295000	346	-25	-4	80	85371	209	-25	-25	-200	-4	315						
08-37.5703-103.5850-2-08-	0-C30355	93290	176	-25	-4	63	40034	39	-25	-25	-200	-4	290						
08-37.5733-103.5517-2-08-	0-C30357	87393	221	-25	-4	43	35079	13	-25	-25	-200	-4	140						
08-37.5911-103.5650-2-08-	0-C30358	80955	231	-25	-4	83	83788	16	-25	-25	-200	-4	307						

08-37.6036-103.5619-2-08-	0-C30359-09/04/77-13-	26-18.8-C-	- 7.2-	1500-	4-1-1-	- - - -	-1-2-3-2-	-9-1-	6-	30-	15-	5.00
08-37.6158-103.5694-2-06-	0-C30360-09/04/77-14-	27-23.0-C-	- 7.1-	1200-	6-1-5-5-7-2-3-1-2-2-3-3-2-	-3-	-	-	-	-	-	1.59
08-37.6203-103.5256-2-06-	0-C30361-09/04/77-15-	31-26.6-C-	- 8.5-	2750-	6-1-2-7-9-	- - - -	-1-3-3-2-	-3-	-	-	-	2.50
08-37.5992-103.5489-2-06-	0-C30363-09/04/77-16-	31-20.5-C-	- 7.0-	1420-	5-1-1-6-8-2-3-1-1-1-2-3-2-	-3-	-	-	-	-	3.64	
08-37.5128-103.5053-2-08-	0-C30364-09/05/77-11-	30-20.8-C-	- 7.0-	3700-	10-1-1-	- - - -	-1-2-3-2-	-9-1-	6-	70-	20-	23.77
08-37.6150-103.4714-2-08-	0-C30365-09/04/77-17-	31-18.8-C-	- 7.6-	2850-	5-1-1-	- - - -	-1-2-2-2-	-9-1-	6-	60-	20-	6.90
08-37.5867-103.4697-2-08-	0-C30367-09/05/77- 9-	27-18.5-C-	- 7.8-	1300-	8-1-1-	- - - -	-4-3-3-2-	-9-1-	6-	75-	30-	3.19
08-37.5697-103.4747-2-08-	0-C30370-09/05/77-10-	30-26.4-C-	- 7.1-	1350-	6-1-1-	- - - -	- - - -	-9-1-	6-	60-	20-	2.39
08-37.5081-103.4897-2-08-	0-C30371-09/05/77-13-	32-19.2-C-	- -	-	5-1-1-	- - - -	-4-3-3-2-	-9-1-	6-	60-	20-	2.77
08-37.5475-103.4411-2-08-	0-C30372-09/05/77-15-	33-20.5-C-	- 6.9-	1950-	5-1-1-	- - - -	-3-4-3-2-	-9-1-	6-	75-	30-	10.40*
08-37.5796-103.4019-2-08-	0-C30373-09/05/77-16-	33-18.8-C-	- 7.3-	1100-	6-1-7-	- - - -	-4-3-3-2-	-1-	6-	30-	20-	6.38
08-37.5611-103.3803-2-08-	0-C30374-09/05/77-17-	32-15.2-C-	- 7.1-	2110-	5-1-7-	- - - -	-1-2-3-2-	-9-1-	6-	50-	20-	8.95
08-37.5233-103.4317-2-08-	0-C30376-09/06/77-18-	30-25.8-C-	- 7.6-	4700-	5-1-2-	- - - -	-1-3-2-1-	-9-1-	6-	350-	200-	2.63
08-37.5231-103.4092-2-08-	0-C30377-09/06/77-19-	29-15.2-C-	- 6.8-	1000-	5-1-1-	- - - -	-4-3-2-1-	-9-1-	6-	30-	15-	3.42
08-37.6069-103.4794-2-08-	0-C30378-09/09/77-12-	33-21.5-C-	- 7.0-	790-	5-1-1-	- - - -	-2-3-3-1-	-9-3-	6-	75-	40-	5.59
08-37.5328-103.3517-2-08-	0-C30380-09/08/77-11-	32-19.5-C-	- 7.6-	2350-	5-1-1-	- - - -	-1-2-3-1-	-9-1-	6-	50-	30-	1.84
08-37.5747-103.3425-2-06-	0-C30383-09/16/77- 9-	21-17.2-C-	- 6.6-	500-	4-1-1-5-6-1-2-5-	-1-2-2-2-	-3-	-	-	-	-	0.51
08-37.5739-103.3306-2-08-	0-C30384-09/16/77-10-	25-16.0-C-	- 7.6-	3950-	6-1-1-	- - - -	-1-2-3-2-	-9-1-	6-	100-	50-	14.79
08-37.5533-103.3181-2-08-	0-C30385-09/16/77-11-	29-18.2-C-	- 6.6-	3300-	7-1-1-	- - - -	-1-3-3-2-	-9-1-	6-	150-	50-	4.89
08-37.5483-103.2978-2-08-	0-C30386-09/16/77-11-	29-17.5-C-	- 8.2-	1500-	7-1-7-	- - - -	-1-2-3-2-	-9-9-	6-	150-	75-	6.50
08-37.5281-103.2983-2-06-	0-C30388-09/16/77-12-	30-17.8-C-	- 7.3-	1290-	5-1-1-4-6-1-2-5-2-1-2-3-2-	-3-	-	-	-	-	3.50	
08-37.5583-103.2717-2-08-	0-C30389-09/16/77-12-	31-18.8-C-	- 8.9-	2200-	5-1-1-	- - - -	-2-2-2-2-	-9-1-	6-	60-	30-	10.64
08-37.5131-103.2694-2-06-	0-C30391-09/16/77-13-	31-18.8-C-	- 7.0-	1400-	5-1-1-4-6-2-3-1-2-1-2-3-3-	-3-	-	-	-	-	3.50	
08-37.5192-103.1389-2-08-	0-C30392-09/29/77-18-	26-18.5-	- 7.0-	600-	5-1-1-	- - - -	-4-2-2-2-	-3-1-	8-	50-	-	5.35
08-37.5078-103.1778-2-08-	0-C30393-09/29/77-18-	26-22.0-	- 7.3-	1750-	16-	- - - -	-2-	-2-3-2-2-	-5-	-	-	4.42
08-37.5142-103.2039-2-08-	0-C30394-09/29/77-18-	22-18.0-	- 7.2-	1460-	13-1-1-	- - - -	-2-3-1-3-	-3-1-	8-	150-	-	1.41
08-37.5883-103.2458-2-08-	0-C30397-09/30/77-12-	30-	- 7.2-	2200-	11-1-1-							

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB. SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.6036-103.5619-2-08-						0-C30359	53139	177	-25	-4	95	43846	26	-25	-25	-200	-4	895	
08-37.6158-103.5694-2-06-						0-C30360	60364	174	-25	-4	36	32875	114	-25	-25	-200	-4	121	
08-37.6203-103.5256-2-06-						0-C30361	13444	144	-25	-4	34	77114	16	-25	-25	-200	-4	65	
08-37.5992-103.5489-2-06-						0-C30363	87697	193	-25	-4	63	66922	17	-25	-25	-200	-4	79	
08-37.5128-103.5053-2-08-						0-C30364	434000	399	-25	-4	103	123000	20	-25	-25	-200	-4	843	
08-37.6150-103.4714-2-08-						0-C30365	113000	242	-25	-4	86	111000	19	-25	-25	-200	-4	202	
08-37.5867-103.4697-2-08-						0-C30367	24698	166	-25	-4	34	57357	14	-25	-25	-200	-4	-50	
08-37.5697-103.4747-2-08-						0-C30370	94625	182	-25	-4	73	51388	38	-25	-25	-200	-4	987	
08-37.5081-103.4897-2-08-						0-C30371	531000	309	104	-4	198	106000	23	-25	697	-200	85	285	
08-37.5475-103.4411-2-08-						0-C30372	301000	189	72	-4	472	74853	29	-25	535	-200	64	790	
08-37.5786-103.4019-2-08-						0-C30373	64768	80	-25	-4	156	34428	8	-25	167	-200	22	125	
08-37.5611-103.3803-2-08-						0-C30374	104000	130	-25	-4	85	80104	9	-25	179	-200	25	266	
08-37.5233-103.4317-2-08-						0-C30376	361000	255	-25	-4	261	419000	20	-25	319	-200	48	317	
08-37.5231-103.4092-2-08-						0-C30377	116000	102	-25	-4	52	40436	8	-25	218	-200	20	253	
08-37.6069-103.4794-2-08-						0-C30378	89198	85	-25	-4	43	42848	16	-25	-25	-200	17	223	
08-37.5328-103.3517-2-08-						0-C30380	26740	-55	-25	-4	101	17740	12	-25	46	-200	9	236	
08-37.5747-103.3425-2-06-						0-C30383	77195	-55	34	-4	139	8838	334	-25	177	-200	20	117	
08-37.5739-103.3306-2-08-						0-C30384	203000	121	-25	-4	80	170000	13	-25	172	-200	20	1117	
08-37.5533-103.3181-2-08-						0-C30385	338000	182	-25	-4	98	335000	18	-25	76	-200	35	274	
08-37.5483-103.2978-2-08-						0-C30386	67553	-55	-25	-4	58	67937	8	-25	212	-200	24	224	
08-37.5281-103.2983-2-06-						0-C30388	218000	103	-25	-4	56	78240	15	-25	302	-200	33	192	
08-37.5583-103.2717-2-08-						0-C30389	87699	59	-25	-4	39	97993	5	-25	-25	-200	22	199	
08-37.5131-103.2694-2-06-						0-C30391	235000	114	-25	-4	56	83428	14	-25	-25	-200	-4	248	
08-37.5192-103.1389-2-08-						0-C30392	129000	-55	-25	-4	-25	55063	7	-25	199	-200	15	254	
08-37.5078-103.1778-2-08-						0-C30393	109000	-55	-25	-4	99	58835	8	-25	73	-200	14	204	
08-37.5142-103.2039-2-08-						0-C30394	133000	93	-25	-4	1211	64383	223	-25	73	-200	21	1115	
08-37.5983-103.2458-2-08-						0-C30397	393000	226	-25	-4	114	132000	17	-25	370	-200	48	1358	
08-37.6203-103.2294-2-08-						0-C30398	241000	143	-25	-4	92	55401	9	-25	254	-200	35	255	
08-37.5461-103.2264-2-08-						0-C30399	575000	325	-25	-4	165	212000	20	-25	793	-200	97	483	
08-37.6133-103.1772-2-08-						0-C30400	93043	113	-25	-4	107	105000	20	-25	288	-200	26	213	
08-37.6239-103.1386-2-08-						0-C30401	110000	110	-25	-4	40	94337	14	-25	161	-200	9	167	
08-37.6022-103.2056-2-08-						0-C30402	699000	368	391	-4	176	64234	28	-25	1432	-200	146	441	
08-37.5806-103.1578-2-08-						0-C30403	387000	269	203	-4	455	135000	33	-25	1335	-200	141	492	
08-37.5994-103.1767-2-08-						0-C30405	144000	93	-25	-4	67	77318	19	-25	251	-200	24	315	
08-37.5469-103.1656-2-08-						0-C30406	826000	368	176	-4	2590	167000	55	-25	1383	-200	141	863	
08-37.6533-103.1475-2-08-						0-C30408	78616	132	142	-4	109	64104	11	-25	897	-200	74	350	
08-37.6169-103.0781-2-06-						0-C30409	158000	99	131	-4	471	29596	42	-25	697	-200	60	260	
08-37.5956-103.0917-2-08-						0-C30410	323000	234	153	-4	1495	87882	1485	-25	985	-200	84	908	
08-37.5939-103.0317-2-08-						0-C30412	51040	63	102	-4	28	15844	14	60	573	-200	44	268	
08-37.5636-103.0508-2-08-						0-C30417	199000	141	-25	-4	49	98276	10	-25	537	-200	40	288	
08-37.5564-103.0742-2-08-						0-C30420	272000	187	263	-4	566	77199	65	-25	1348	-200	110	362	
08-37.6111-103.1019-2-08-						0-C30422	201000	201	-25	-4	100	224000	15	-25	626	-200	56	354	
08-37.5517-103.0050-2-08-						0-C30423	53092	83	-25	-4	86	144000	13	-25	348	-200	43	301	
08-37.5278-103.1111-2-08-						0-C30424	54266	80	-25	-4	33	120000	8	255	414	-200	23	189	
08-37.2867-103.0339-2-08-						0-C30425	57277	-55	45	-4	49	23618	50	-25	346	-200	28	876	
08-37.2728-103.0497-2-08-						0-C30426	60198	-55	82	-4	74	18960	31	-25	454	-200	35	208	
08-37.3003-103.1197-2-08-						0-C30428	90338	-55	-25	-4	827	24309	35	-25	241	-200	22	218	
08-37.2564-103.1031-2-08-						0-C30429	119000	91	-25	-4	109	43664	17	-25	317	-200	24	375	
08-37.3708-103.0147-2-08-						0-C30430	66790	83	-25	-4	648	23220	72	-25	142	-200	13	730	
08-37.3467-103.0219-2-08-						0-C30431	73075	-55	65	-4	85	17999	6	-25	311	-200	29	295	
08-37.3014-103.0417-2-08-						0-C30434	78438	-55	26	-4	87	18282	9	-25	263	-200	23	301	

[illegible]

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS. SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.3350-103.0681-2-08-	0-C30435	54975	-55	76	-4	116	26077	8	-25	421	-200	39	375						
08-37.3511-103.0939-2-08-	0-C30436	157000	93	-25	-4	2201	59638	127	-25	321	-200	26	298						
08-37.2919-103.1042-2-08-	0-C30438	90756	90	-25	-4	355	29174	66	-25	251	-200	26	614						
08-37.3803-103.9594-2-08-	0-C30439	259000	148	-25	-4	6152	98855	113	-25	464	-200	60	303						
08-37.3844-103.9967-2-08-	0-C30440	145000	278	-25	-4	7057	67570	263	-25	-25	-200	-4	250						
08-37.4006-103.8975-2-08-	0-C30441	75771	214	-25	-4	88	37107	20	-25	-25	-200	-4	2268						
08-37.3953-103.8778-2-08-	0-C30442	65283	212	-25	-4	7607	33707	170	-25	-25	-200	-4	261						
08-37.4186-103.9419-2-08-	0-C30445	101000	231	-25	-4	3384	60981	100	-25	-25	-200	-4	276						
08-37.4578-103.9839-2-08-	0-C30446	119000	268	-25	-4	834	80323	263	-25	-25	-200	-4	406						
08-37.4442-103.9269-2-08-	0-C30447	241000	355	-25	-4	11571	127000	468	-25	103	-200	-4	666						
08-37.4422-103.8922-2-08-	0-C30449	49314	135	-25	-4	126	8387	21	-25	-25	-200	-4	207						
08-37.4450-103.9989-2-08-	0-C30450	140000	267	-25	-4	10182	70550	361	-25	-25	-200	-4	401						
08-37.3853-103.9753-2-08-	0-C30451	109000	290	-25	-4	284	67321	111	-25	-25	-200	-4	489						
08-37.3200-103.1403-2-08-	0-C30452	173000	287	-25	-4	39	73881	57	-25	-25	-200	-4	496						
08-37.3747-103.1561-2-08-	0-C30453	82644	207	-25	-4	268	32583	119	-25	-25	-200	-4	189						
08-37.3831-103.7939-2-08-	0-C30455	104000	144	-25	-4	742	13414	36	-25	-25	-200	-4	105						
08-37.3831-103.7731-2-06-	0-C30456	74984	180	-25	-4	119	11809	302	-25	-25	-200	-4	51						
08-37.4353-103.7539-2-06-	0-C30457	609000	432	273	-4	197	67494	260	-25	1207	-200	111	222						
08-37.4661-103.8583-2-08-	0-C30458	150000	543	162	-4	87821	71648	45	-25	1645	-200	82	2221						
08-37.4978-103.8378-2-06-	0-C30460	70796	284	175	-4	738	27690	161	61	942	-200	56	231						
08-37.4964-103.8375-2-08-	0-C30461	218000	374	146	-4	1737	91738	86	-25	1054	-200	74	179						
08-37.4272-103.7469-2-06-	0-C30462	444000	444	264	-4	249	46036	249	-25	1214	-200	96	384						
08-37.4036-103.7339-2-06-	0-C30463	86260	289	295	-4	90	25869	60	137	1261	-200	87	209						
08-37.3797-103.7497-2-08-	0-C30464	48323	255	259	-4	89	10818	26	165	1011	-200	67	724						
08-37.3889-103.7200-2-06-	0-C30465	27398	235	91	-4	81	2383	27	58	498	-200	19	-50						
08-37.4842-103.6992-2-08-	0-C30467	593000	444	162	-4	165	112000	52	-25	1141	-200	100	1054						
08-37.4728-103.6578-2-08-	0-C30469	26146	-55	62	-4	78	10496	-3	26	158	-200	27	196						
08-37.4397-103.6781-2-08-	0-C30470	250000	158	-25	-4	96	72753	5	-25	186	-200	54	561						
08-37.3794-103.6469-2-06-	0-C30472	437000	259	256	-4	471	76117	117	-25	987	-200	108	166						
08-37.4939-103.6253-2-08-	0-C30473	375000	223	-25	-4	100	70944	6	-25	161	-200	53	303						
08-37.4917-103.5008-2-08-	0-C30474	386000	273	199	-4	132	99177	13	-25	909	-200	105	250						
08-37.4211-103.5972-2-08-	0-C30475	141000	125	41	-4	155	44221	4	-25	243	-200	42	807						
08-37.4833-103.5556-2-06-	0-C30476	68933	83	29	-4	-25	32631	-3	-25	160	-200	25	126						
08-37.4389-103.5342-2-06-	0-C30477	82044	91	55	-4	61	26716	116	-25	249	-200	32	96						
08-37.3939-103.5364-2-08-	0-C30478	66638	-55	78	-4	71	19786	7	-25	244	-200	35	204						
08-37.3828-103.5631-2-06-	0-C30479	193000	145	91	-4	86	32339	322	-25	389	-200	41	96						
08-37.3928-103.6158-2-06-	0-C30480	74168	63	-25	-4	50	24868	37	-25	-25	-200	14	-50						
08-37.4064-103.6067-2-06-	0-C30481	53515	-55	-25	-4	57	6229	5	-25	-25	-200	-4	-50						
08-37.3986-103.5958-2-08-	0-C30482	89344	94	-25	-4	12921	48005	84	-25	115	-200	20	114						
08-37.4817-103.6064-2-08-	0-C30483	169000	122	-25	-4	132	47053	-3	-25	167	-200	30	-50						
08-37.4544-103.5808-2-06-	0-C30486	115000	69	-25	-4	38	26628	5	-25	70	-200	22	165						
08-37.4439-103.5775-2-06-	0-C30487	34197	-55	-25	-4	90	5316	20	-25	-25	-200	-4	-50						
08-37.4986-103.6039-2-08-	0-C30488	423000	279	241	-4	535	83224	24	-25	951	-200	120	255						
08-37.4536-103.5039-2-06-	0-C30490	69787	63	-25	-4	30	50487	5	-25	112	-200	35	-50						
08-37.4925-103.4694-2-06-	0-C30491	15565	-55	95	-4	59	3697	-3	65	146	306	32	-50						
08-37.4622-103.4492-2-08-	0-C30492	37126	-55	-25	-4	-25	34675	-3	-25	-25	-200	15	215						
08-37.4461-103.4817-2-06-	0-C30495	77180	-55	39	-4	39	34904	451	-25	143	-200	31	-50						
08-37.4117-103.4761-2-06-	0-C30496	85054	87	109	-4	29	36228	4	-25	317	-200	47	-50						
08-37.4061-103.4883-2-06-	0-C30497	69278	-55	82	-4	35	15991	68	-25	207	-200	37	-50						
08-37.3917-103.4683-2-06-	0-C30498	91862	71	-25	-4	41	20719	-3	-25	-25	-200	14	-50						
08-37.4100-103.4517-2-06-	0-C30499	42483	-55	47	-4	-25	24916	-3	-25	175	-200	30	-50						

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.4003-103.4172-2-06-						0-C30501	48275	-55	66	-4	-25	23112	-3	34	203	-200	35	-50	
08-37.3778-103.4247-2-08-						0-C30502	52128	58	-25	-4	75	23578	-3	-25	-25	-200	16	-50	
08-37.4331-103.4344-2-08-						0-C30503	87827	71	50	-4	57	55650	9	-25	278	-200	47	171	
08-37.4978-103.3842-2-08-						0-C30506	42941	64	-25	-4	66	32002	-3	42	103	-200	14	222	
08-37.4442-103.3983-2-06-						0-C30507	49400	-55	79	-4	-25	26869	10	93	221	-200	36	-50	
08-37.4161-103.4053-2-06-						0-C30508	56149	-55	51	-4	-25	21411	11	-25	130	-200	31	-50	
08-37.4136-103.3869-2-08-						0-C30509	44486	59	-25	-4	27	35931	6	-25	-25	-200	11	114	
08-37.3997-103.3867-2-06-						0-C30510	77011	-55	64	-4	-25	26376	-3	-25	107	-200	43	-50	
08-37.4561-103.3878-2-06-						0-C30511	110000	92	34	-4	63	62701	23	-25	215	-200	45	51	
08-37.3783-103.3494-2-08-						0-C30513	73740	-55	51	-4	118	11561	-3	-25	115	-200	28	98	
08-37.3986-103.3217-2-06-						0-C30514	37016	-55	-25	-4	36	6316	5	-25	-25	-200	-4	-50	
08-37.4094-103.3544-2-06-						0-C30515	62937	-55	56	-4	36	10032	930	-25	86	-200	30	-50	
08-37.4692-103.3667-2-06-						0-C30517	87897	-55	-25	-4	82	37669	33	-25	98	-200	27	-50	
08-37.4914-103.3158-2-08-						0-C30518	34335	-55	65	-4	147	4615	-3	-25	73	-200	25	112	
08-37.4944-103.2761-2-06-						0-C30519	113000	73	32	-4	-25	37515	4	-25	149	-200	42	-50	
08-37.4603-103.2583-2-08-						0-C30521	50479	-55	43	-4	-25	10748	-3	-25	69	-200	24	-50	
08-37.4259-103.2881-2-08-						0-C30523	56265	-55	47	-4	27	16758	-3	-25	69	-200	27	-50	
08-37.4069-103.3444-2-08-						0-C30524	51975	-55	44	-4	281	16630	9	-25	36	-200	25	-50	
08-37.4136-103.2994-2-06-						0-C30526	57001	-55	-25	-4	-25	13016	276	-25	-25	-200	19	-50	
08-37.3958-103.2717-2-08-						0-C30527	34780	-55	-25	-4	3110	15235	76	34	70	-200	37	196	
08-37.3828-103.3161-2-08-						0-C30528	31539	-55	-25	-4	70	9654	11	-25	96	-200	19	96	
08-37.4942-103.1750-2-08-						0-C30529	219000	235	-25	-4	75	130000	15	-25	350	-200	51	244	
08-37.4944-103.1436-2-08-						0-C30530	210000	293	63	-4	129	144000	17	84	853	-200	88	355	
08-37.4544-103.1661-2-08-						0-C30531	184000	162	-25	-4	128	86346	7	-25	435	-200	45	196	
08-37.4136-103.1431-2-08-						0-C30534	159000	155	-25	-4	116	62427	16	-25	367	-200	39	87	
08-37.4372-103.1297-2-08-						0-C30535	10563	-55	-25	-4	-25	28880	-3	268	115	-200	-4	-50	
08-37.4022-103.1764-2-08-						0-C30536	191000	211	135	-4	159	77145	13	-25	827	-200	84	949	
08-37.3969-103.2475-2-08-						0-C30538	76627	118	40	-4	433	33442	53	-25	271	-200	30	196	
08-37.4256-103.2366-2-08-						0-C30539	12813	-55	-25	-4	-25	29649	5	193	113	-200	-4	62	
08-37.4828-103.2061-2-08-						0-C30542	108000	133	30	-4	88	33785	43	-25	320	-200	33	333	
08-37.4947-103.2344-2-08-						0-C30543	88765	126	-25	-4	34	40776	-3	34	193	-200	14	144	
08-37.4261-103.1092-2-08-						0-C30544	196000	166	53	-4	2464	58481	95	-25	446	-200	48	870	
08-37.4172-103.1203-2-09-						0-C30545	9125	68	48	-4	-25	15392	-3	267	237	-200	8	116	
08-37.4753-103.0972-2-08-						0-C30547	315000	233	52	-4	133	92709	12	-25	646	-200	64	388	
08-37.4489-103.0133-2-08-						0-C30548	107000	134	57	-4	184	39408	26	-25	401	-200	29	288	
08-37.4328-103.0522-2-08-						0-C30549	76695	119	-25	-4	36	34426	-3	119	297	-200	13	238	
08-37.4233-103.0308-2-08-						0-C30551	78495	128	-25	-4	75	33106	7	32	224	-200	24	273	
08-37.3650-103.9267-2-08-						0-C30552	153000	217	76	-4	11808	97121	261	-25	702	-200	59	292	
08-37.2661-103.9331-2-08-						0-C30553	35357	-55	75	-4	14869	9915	79	56	388	-200	21	147	
08-37.2756-103.8844-2-08-						0-C30554	35327	-55	-25	-4	425	28693	100	-25	93	-200	10	496	
08-37.2878-103.8994-2-08-						0-C30556	154000	157	67	-4	49468	81057	407	-25	656	-200	53	315	
08-37.3039-103.9133-2-08-						0-C30558	84952	117	-25	-4	24890	30454	435	-25	241	-200	41	1060	
08-37.3064-103.8903-2-08-						0-C30559	74427	91	36	-4	206	15189	23	-25	148	-200	29	376	
08-37.3161-103.8819-2-08-						0-C30560	81477	133	69	-4	1306	33945	50	-25	334	-200	32	434	
08-37.3417-103.8883-2-08-						0-C30561	97318	128	83	-4	4299	27530	70	30	377	-200	36	432	
08-37.3267-103.9889-2-08-						0-C30562	118000	162	-25	-4	32078	88734	447	-25	418	-200	36	345	
08-37.3067-103.9897-2-08-						0-C30563	79283	138	-25	-4	23379	72193	258	-25	159	-200	27	490	
08-37.3283-103.9364-2-08-						0-C30564	191000	308	29	-4	37319	111000	1061	-25	851	-200	56	932	
08-37.3358-103.9519-2-06-						0-C30565	106000	145	-25	-4	401	73613	222	42	140	-200	42	84	
08-37.3422-103.9706-2-06-						0-C30566	22601	-55	29	-4	26	3287	-3	-25	71	-200	13	-50	
08-37.3417-103.9683-2-06-						0-C30567	75927	75	33	-4	407	14978	377	-25	73	-200	23	-50	

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																	U CONCENTRATION											
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SCINTILLOMETER (rel. ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (6) UNITS IN PPB
							DATE	HOUR																										
08-37.3572-103.9947-2-06-	0-C30568-09/08/77-12-	31-27.0-C-	7.7-	610-	4-1-2-4-6-2-2-4-2-3-3-3-2-	-3-	-	-	-	0.97																								
08-37.2931-103.8672-2-08-	0-C30570-09/04/77-13-	31-27.8-C-	7.0-	970-	11-1-1-	-	-	-	-	4-3-2-2-	-9-1-	6-200-150-	0.02																					
08-37.3075-103.8456-2-06-	0-C30571-09/04/77-15-	33-29.2-C-	7.5-	160-	4-1-2-5-6-1-3-3-2-	-1-2-2-2-	-3-	-	-	1.01																								
08-37.3181-103.8122-2-08-	0-C30574-08/05/77-9-	24-15.5-C-	7.1-	1370-	9-1-1-	-	-	-	-	4-3-2-2-	-9-1-	8-200-150-	0.67																					
08-37.3356-103.8606-2-06-	0-C30575-08/05/77-10-	27-20.5-C-	7.2-	350-	3-1-2-7-8-2-3-1-	-3-4-4-2-	-3-	-	-	0.39																								
08-37.3653-103.8317-2-08-	0-C30577-08/05/77-11-	29-16.5-C-	7.3-	2100-	9-1-1-	-	-	-	-	3-3-2-2-	-1-	6-150-120-	0.47																					
08-37.3631-103.8439-2-06-	0-C30578-08/05/77-11-	30-24.0-C-	7.2-	340-	3-1-2-4-6-2-2-1-2-1-2-3-2-	-3-	-	-	-	0.59																								
08-37.3500-103.7786-2-08-	0-C30580-08/05/77-13-	31-17.5-C-	7.5-	520-	8-1-2-	-	-	-	-	1-2-3-2-	-9-4-	6-100-50-	4.12																					
08-37.3117-103.7700-2-08-	0-C30582-08/05/77-14-	29-16.2-C-	7.1-	900-	7-1-1-	-	-	-	-	4-3-2-2-	-9-1-	6-150-120-	9.74																					
08-37.2928-103.7828-2-08-	0-C30583-08/05/77-14-	28-17.0-C-	6.9-	1200-	8-1-1-	-	-	-	-	4-3-2-2-	-9-1-	6-150-120-	96.20*																					
08-37.2922-103.8283-2-08-	0-C30584-08/09/77-9-	26-16.0-C-	7.4-	680-	11-1-1-	-	-	-	-	4-3-2-2-	-9-1-	6-175-150-	7.57																					
08-37.2578-103.6839-2-08-	0-C30585-08/06/77-13-	32-19.8-C-	7.4-	890-	7-1-2-	-	-	-	-	4-2-1-2-	-9-1-	8-150-120-	8.54																					
08-37.2608-103.6425-2-06-	0-C30587-08/07/77-9-	27-18.6-C-	7.4-	400-	6-1-2-6-8-1-2-5-2-3-4-4-1-	-3-	-	-	-	1.36																								
08-37.2889-103.6353-2-08-	0-C30588-08/07/77-16-	32-15.5-C-	7.9-	670-	11-1-2-	-	-	-	-	1-2-3-2-	-9-1-	6-130-100-	7.48																					
08-37.3369-103.7269-2-08-	0-C30590-08/09/77-18-	30-15.5-C-	7.9-	590-	5-1-2-	-	-	-	-	4-3-2-2-	-9-1-	6-200-170-	7.07																					
08-37.3617-103.7375-2-08-	0-C30591-08/09/77-18-	30-18.2-C-	8.0-	750-	6-1-2-	-	-	-	-	4-3-2-2-	-9-1-	6-200-150-	8.68																					
08-37.3575-103.7011-2-06-	0-C30592-08/10/77-9-	25-19.2-C-	7.4-	650-	10-1-2-4-6-2-3-1-2-1-3-3-2-	-3-	-	-	-	4.04																								
08-37.3339-103.6350-2-08-	0-C30593-09/02/77-11-	29-15.2-C-	7.2-	900-	8-1-1-	-	-	-	-	1-2-2-2-	-9-1-	6-150-75-	34.92																					
08-37.3508-103.6289-2-08-	0-C30594-09/02/77-12-	30-16.8-C-	7.2-	950-	5-1-1-	-	-	-	-	4-3-2-2-	-9-1-	6-75-50-	26.54																					
08-37.3714-103.6272-2-08-	0-C30595-09/02/77-12-	31-18.5-C-	6.8-	1050-	10-1-1-	-	-	-	-	1-2-2-2-	-9-1-	6-150-100-	1.57																					
08-37.3217-103.5936-2-08-	0-C30596-09/02/77-10-	28-14.8-C-	6.7-	1360-	10-1-1-	-	-	-	-	4-3-2-2-	-9-1-	6-200-150-	43.70*																					
08-37.3019-103.5206-2-08-	0-C30598-08/07/77-14-	32-20.8-C-	7.4-	1090-	11-1-1-	-	-	-	-	4-2-1-2-	-9-1-	6-185-168-	3.72																					
08-37.3050-103.5644-2-08-	0-C30599-08/07/77-14-	32-14.2-C-	7.2-	1950-	10-1-1-	-	-																											

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB. SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.3572-103.9947-2-06-			0-C30563			75541		80	56	-4	97	15948	38	33	150	-200	33	-50	
08-37.2931-103.3672-2-08-			0-C30570			127000		154	-25	-4	15366	51476	258	-25	264	-200	35	893	
08-37.3075-103.8456-2-06-			0-C30571			25138		-55	84	-4	193	2431	52	80	205	-200	27	82	
08-37.3181-103.8122-2-08-			0-C30574			137000		166	78	-4	4747	69358	200	100	458	-200	48	832	
08-37.3356-103.8606-2-06-			0-C30575			56964		58	-25	-4	115	13358	60	-25	43	-200	19	62	
08-37.3653-103.8317-2-08-			0-C30577			230000		209	-25	-4	1220	140000	204	-25	183	-200	38	187	
08-37.3631-103.8439-2-06-			0-C30578			64999		132	253	-4	127	5798	141	203	722	-200	78	100	
08-37.3500-103.7786-2-08-			0-C30580			111000		65	-25	-4	37	10797	-3	-25	-25	-200	14	96	
08-37.3117-103.7700-2-08-			0-C30582			100000		137	30	-4	21315	53596	271	-25	319	-200	34	438	
08-37.2928-103.7828-2-08-			0-C30583			142000		124	-25	-4	10617	67672	237	-25	256	-200	28	745	
08-37.2922-103.8283-2-08-			0-C30584			118000		73	-25	-4	3304	30148	14	-25	45	-200	22	197	
08-37.2578-103.6839-2-08-			0-C30585			118000		136	-25	-4	59	46367	40	-25	128	-200	27	2040	
08-37.2608-103.6425-2-06-			0-C30587			72285		-55	-25	-4	-25	12375	4	-25	-25	-200	19	108	
08-37.2889-103.6353-2-08-			0-C30588			95803		60	-25	-4	82	29145	-3	-25	145	-200	22	310	
08-37.3369-103.7269-2-08-			0-C30590			113000		-55	33	-4	174	21186	9	-25	163	-200	29	159	
08-37.3617-103.7375-2-08-			0-C30591			121000		69	-25	-4	531	35397	14	-25	116	-200	29	190	
08-37.3575-103.7011-2-06-			0-C30592			201000		138	-25	-4	71	27068	2092	-25	-25	-200	24	70	
08-37.3339-103.6350-2-08-			0-C30593			111000		77	-25	-4	184	31654	8	-25	105	-200	24	63	
08-37.3508-103.6289-2-08-			0-C30594			154000		105	-25	-4	134	35998	6	-25	118	-200	29	89	
08-37.3714-103.6272-2-08-			0-C30595			161000		70	-25	-4	25553	44810	89	-25	200	-200	35	134	
08-37.3217-103.5836-2-08-			0-C30596			201000		110	-25	-4	215	70860	10	-25	93	-200	27	64	
08-37.3019-103.5206-2-08-			0-C30598			163000		114	-25	-4	3333	52612	57	-25	110	-200	25	2385	
08-37.3050-103.5644-2-08-			0-C30599			184000		177	-25	-4	487	81612	18	-25	126	-200	36	119	
08-37.2783-103.5731-2-08-			0-C30600			63269		71	-25	-4	132	16512	7	-25	-25	-200	11	129	
08-37.2606-103.5764-2-08-			0-C30601			134000		167	78	-4	123	36028	4	147	263	-200	41	149	
08-37.2722-103.5894-2-08-			0-C30602			71244		75	-25	-4	85	15493	5	-25	63	-200	15	146	
08-37.3647-103.5092-2-08-			0-C30603			43683		181	-25	-4	48964	8349	507	-25	291	-200	7	18133	
08-37.3467-103.5506-2-06-			0-C30604			59613		62	-25	-4	70	7473	32	-25	-25	-200	-4	129	
08-37.3222-103.5194-2-08-			0-C30605			92933		121	-25	-4	491	34937	43	-25	-25	-200	8	3074	
08-37.2875-103.5861-2-06-			0-C30608			29138		-55	-25	-4	307	3583	7	-25	-25	-200	20	-50	
08-37.3061-103.5922-2-06-			0-C30609			26547		-55	-25	-4	408	3313	9	-25	-25	-200	9	52	
08-37.3281-103.6200-2-08-			0-C30610			81964		123	-25	-4	51	21012	123	-25	65	-200	14	6671	
08-37.3739-103.5894-2-08-			0-C30612			97098		117	-25	-4	487	27117	13	-25	58	-200	18	485	
08-37.3486-103.4097-2-08-			0-C30614			70127		103	-25	-4	115	12534	11	-25	-25	-200	12	353	
08-37.3361-103.3758-2-08-			0-C30615			146000		139	-25	-4	8732	34943	132	-25	-25	-200	-4	213	
08-37.3025-103.4208-2-07-			0-C30616			77430		108	-25	-4	49	19397	39	-25	-25	-200	14	-50	
08-37.2808-103.4094-2-08-			0-C30617			110000		125	-25	-4	94	29100	7	-25	-25	-200	7	95	
08-37.2750-103.3892-2-08-			0-C30618			530000		333	-25	-4	161	174000	29	-25	289	-200	59	765	
08-37.2544-103.4297-2-08-			0-C30619			160000		186	-25	-4	750	89634	39	-25	97	-200	23	407	
08-37.3064-103.4500-2-08-			0-C30620			193000		201	-25	-4	517	126000	123	-25	86	-200	30	252	
08-37.3317-103.4536-2-08-			0-C30621			52522		60	-25	-4	298	13658	9	-25	-25	-200	18	103	
08-37.3550-103.4225-2-06-			0-C30622			90744		98	-25	-4	84	29581	122	-25	-25	-200	6	484	
08-37.3156-103.4747-2-06-			0-C30623			16920		74	45	-4	157	2815	19	77	54	-200	13	-50	
08-37.3056-103.4958-2-08-			0-C30624			139000		205	-25	-4	16110	107000	407	-25	279	-200	25	169	
08-37.3583-103.4944-2-06-			0-C30625			42185		65	-25	-4	288	4713	10	27	48	-200	20	89	
08-37.3689-103.4642-2-06-			0-C30626			104000		113	-25	-4	41	18387	7	-25	63	-200	21	109	
08-37.2639-103.4625-2-08-			0-C30627			107000		155	-25	-4	19615	81633	192	-25	170	-200	21	163	
08-37.3586-103.3244-2-08-			0-C30628			94194		91	-25	-4	135	17972	8	-25	-25	-200	-4	206	
08-37.3408-103.2975-2-06-			0-C30629			67160		114	-25	-4	54	16271	13	-25	-25	-200	-4	235	
08-37.3219-103.3294-2-08-			0-C30631			76766		76	-25	-4	84	8988	7	-25	-25	-200	5	259	
08-37.2644-103.3639-2-08-			0-C30633			82802		104	-25	-4	463	54365	56	-25	-25	-200	-4	295	

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.2614-103.3347-2-08-						0-C30634	81782	112	-25	-4	2083	57412	125	-25	-25	-200	9	219	
08-37.2864-103.3558-2-08-						0-C30635	67614	107	-25	-4	165	51161	76	-25	-25	-200	-4	328	
08-37.2858-103.3144-2-08-						0-C30636	72540	105	-25	-4	5858	49722	155	-25	-25	-200	-4	206	
08-37.2856-103.2636-2-08-						0-C30637	54089	65	-25	-4	138	22320	5	-25	-25	-200	7	252	
08-37.2775-103.2914-2-08-						0-C30638	81250	102	-25	-4	89	32594	11	-25	-25	-200	5	896	
08-37.3094-103.2758-2-08-						0-C30640	101000	121	-25	-4	132	42965	28	-25	-25	-200	10	188	
08-37.3553-103.2536-2-08-						0-C30641	41181	100	-25	-4	157	18770	13	-25	-25	-200	6	142	
08-37.3711-103.2589-2-08-						0-C30642	125000	131	-25	-4	10604	48290	104	-25	-25	-200	10	306	
08-37.2794-103.1969-2-08-						0-C30643	85519	104	-25	-4	116	29479	8	-25	-25	-200	7	1750	
08-37.2772-103.1694-2-08-						0-C30644	79475	62	-25	-4	4533	20662	34	-25	-25	-200	-4	143	
08-37.2969-103.1756-2-08-						0-C30645	80322	101	-25	-4	215	27385	8	-25	-25	-200	-4	260	
08-37.2578-103.1375-2-08-						0-C30647	93911	118	-25	-4	168	39558	27	-25	-25	-200	-4	380	
08-37.3264-103.2442-2-08-						0-C30650	76389	136	-25	-4	87	28223	10	-25	-25	-200	-4	389	
08-37.3717-103.2361-2-08-						0-C30651	97452	170	-25	-4	104	66419	29	-25	-25	-200	-4	485	
08-37.3483-103.2103-2-08-						0-C30653	323000	204	-25	-4	152	71233	20	-25	-25	-200	-4	550	
08-37.3564-103.1972-2-08-						0-C30654	180000	149	-25	-4	2309	104000	129	-25	-25	-200	-4	401	
08-37.3131-103.2006-2-08-						0-C30655	69489	105	-25	-4	21103	25733	200	-25	68	-200	11	835	
08-37.3361-103.1808-2-08-						0-C30656	90210	118	-25	-4	2202	55259	204	-25	60	-200	12	266	
08-37.2797-103.0114-2-08-						0-C30658	249000	197	-25	-4	136	106000	13	-25	99	-200	18	439	
08-37.1589-103.9481-2-08-						0-C30661	135000	140	-25	-4	61	29362	11	-25	45	-200	17	314	
08-37.1325-103.9556-2-08-						0-C30663	163000	159	-25	-4	912	55726	65	-25	46	-200	15	285	
08-37.1381-103.8822-2-08-						0-C30664	168000	217	-25	-4	89231	171000	890	-25	372	-200	18	1110	
08-37.1911-103.9856-2-08-						0-C30666	250000	390	-25	-4	21196	193000	2463	-25	491	-200	26	3198	
08-37.1981-103.9628-2-06-						0-C30667	102000	105	-25	-4	93	11840	804	-25	51	-200	8	413	
08-37.2331-103.9219-2-08-						0-C30670	243000	204	-25	-4	51643	68853	549	-25	277	-200	20	478	
08-37.1972-103.9150-2-08-						0-C30671	292000	282	-25	-4	20778	142000	1252	-25	489	-200	33	1996	
08-37.1703-103.9297-2-08-						0-C30672	486000	453	-25	-4	205000	372000	4557	-25	894	-200	39	1217	
08-37.2422-103.8833-2-08-						0-C30673	181000	144	-25	-4	878	72664	67	-25	-25	-200	12	1440	
08-37.1506-103.8486-2-08-						0-C30676	168000	181	-25	-4	83617	65693	1615	-25	299	-200	11	992	
08-37.1464-103.7667-2-08-						0-C30677	172000	182	-25	-4	684	150000	266	-25	-25	-200	8	570	
08-37.1883-103.8511-2-08-						0-C30679	87600	94	-25	-4	101	35333	11	-25	-25	-200	-4	349	
08-37.2347-103.8328-2-08-						0-C30681	167000	165	-25	-4	36531	92941	604	-25	30	-200	9	541	
08-37.2422-103.8028-2-08-						0-C30682	132000	111	-25	-4	310	24277	8	-25	-25	-200	10	379	
08-37.2247-103.7817-2-08-						0-C30688	216000	233	-25	-4	7102	201000	326	-25	49	-200	21	738	
08-37.1500-103.7422-2-08-						0-C30689	367000	317	-25	-4	30732	417000	860	-25	122	-200	29	825	
08-37.1903-103.6978-2-08-						0-C30693	338000	252	-25	-4	352	127000	29	-25	93	-200	21	483	
08-37.1897-103.6436-2-08-						0-C30694	101000	112	-25	-4	12425	29087	66	-25	-25	-200	-4	507	
08-37.2314-103.7122-2-08-						0-C30696	235000	202	-25	-4	141	107000	30	-25	90	-200	19	668	
08-37.2100-103.6803-2-08-						0-C30697	92251	169	-25	-4	21531	40358	115	-25	91	-200	11	591	
08-37.2211-103.7400-2-06-						0-C30701	36619	85	-25	-4	139	5635	12	-25	-25	-200	6	285	
08-37.1503-103.5122-2-06-						0-C30702	57973	114	-25	-4	103	18201	24	-25	-25	-200	-4	362	
08-37.1464-103.5322-2-08-						0-C30704	58156	123	-25	-4	89	19563	5	-25	-25	-200	-4	283	
08-37.1536-103.5636-2-08-						0-C30706	58355	116	-25	-4	107	20349	11	-25	-25	-200	-4	496	
08-37.1703-103.5083-2-06-						0-C30707	57823	104	-25	-4	70	18398	5	-25	-25	-200	-4	474	
08-37.1969-103.5281-2-08-						0-C30708	109000	162	-25	-4	108	33859	6	-25	28	-200	15	445	
08-37.1619-103.6075-2-06-						0-C30711	97148	110	-25	-4	116	24738	314	-25	-25	-200	9	274	
08-37.2328-103.5564-2-08-						0-C30712	168000	82	-25	-4	276	49309	14	-25	37	-200	22	278	
08-37.2039-103.3814-2-08-						0-C30715	163000	77	-25	-4	86	31985	4	-25	62	-200	19	157	
08-37.1903-103.4258-2-08-						0-C30716	56228	-55	-25	-4	37	27038	-3	-25	-25	-200	7	154	
08-37.1739-103.4414-2-08-						0-C30717	53841	-55	-25	-4	43	15650	-3	37	-25	278	14	180	
08-37.1892-103.4544-2-08-						0-C30718	52452	82	-25	-4	61	44132	37	39	151	580	14	1271	

DOE SAMPLE NUMBER						LASE SAMPLE LOCATION NUMBER AND FIELD DATA																	U CONCENTRATION											
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASE SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SCINTILLATOR (cLi ppm)	ROCK TYPE	ROCK COLOR	ROCK TYPE	SEGMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (6) UNITS IN ppb
							DATE	HOUR																										
08-37.2489-103.4106-2-08-	0-C30719-09/19/77-14-	24-18.6-C-	7.0-	2800-	7-1-1-	-	-	-	-	-2-3-1-2-	-9-3-	6-300-250-	1.86																					
08-37.2331-103.4847-2-08-	0-C30721-09/19/77-14-	24-17.5-C-	6.6-	2900-	6-1-1-	-	-	-	-	-4-3-2-2-	-9-1-	6-400-250-	1.68																					
08-37.1772-103.3806-2-08-	0-C30722-09/19/77-10-	20-12.8-C-	6.7-	750-	5-1-1-	-	-	-	-	-2-3-2-2-	-9-1-	6-200-150-	2.73																					
08-37.1519-103.3794-2-08-	0-C30723-09/19/77-10-	21-15.2-C-	7.0-	570-	10-1-1-	-	-	-	-	-4-3-3-2-	-9-1-	6-150-100-	2.23																					
08-37.1339-103.4553-2-08-	0-C30726-09/19/77-11-	23-14.2-C-	6.8-	600-	8-1-1-	-	-	-	-	-1-2-3-2-	-9-1-	6-150-100-	3.09																					
08-37.1311-103.4811-2-08-	0-C30727-09/19/77-12-	20-15.5-C-	7.2-	580-	10-1-1-	-	-	-	-	-1-2-3-2-	-9-1-	6-200-150-	1.43																					
08-37.1417-103.0953-2-06-	0-C30729-10/05/77-16-	14-14.0-C-	6.9-	600-	6-1-2-4-6-1-2-1-	-	-	-	-	-2-3-3-4-	-3-	-	0.79																					
08-37.1483-103.1128-2-08-	0-C30730-10/06/77-16-	13-15.2-C-	6.9-	490-	6-1-6-	-	-	-	-	-4-3-3-4-	-9-1-	6-100-70-	7.44																					
08-37.2414-103.3486-2-08-	0-C30731-09/19/77-10-	19-16.5-C-	6.6-	530-	12-1-1-	-	-	-	-	-4-3-2-2-	-9-1-	6-200-100-	4.82																					
08-37.1975-103.3531-2-08-	0-C30732-09/19/77-10-	20-14.5-C-	6.6-	1000-	6-1-1-	-	-	-	-	-4-3-3-2-	-9-1-	6-150-100-	2.22																					
08-37.1667-103.3533-2-08-	0-C30733-09/19/77-11-	21-20.4-C-	7.2-	560-	10-1-1-	-	-	-	-	-4-3-2-2-	-9-1-	6-150-100-	0.74																					
08-37.1850-103.3158-2-08-	0-C30736-09/20/77-13-	32-18.0-C-	6.9-	500-	6-3-8-	-	-	-	-	-4-3-2-1-	-9-1-	6-350-300-	2.37																					
08-37.1728-103.2897-2-08-	0-C30737-09/20/77-14-	31-18.0-C-	6.7-	550-	6-3-8-	-	-	-	-	-4-3-3-1-	-9-1-	6-300-250-	1.48																					
08-37.1361-103.3317-2-07-	0-C30738-09/20/77-14-	32-21.0-C-	6.8-	900-	5-1-2-4-6-3-3-1-1-3-4-3-1-	-	-	-	-	-3-	-	-	1.98																					
08-37.1453-103.2558-2-08-	0-C30739-09/20/77-10-	28-20.5-C-	-	510-	10-1-2-	-	-	-	-	-1-2-3-1-	-9-1-	6-175-125-	1.51																					
08-37.2503-103.2628-2-08-	0-C30743-09/22/77-18-	26-19.8-C-	6.2-	600-	5-1-2-	-	-	-	-	-3-4-3-2-	-9-3-	-	6.23																					
08-37.2344-103.2872-2-08-	0-C30744-09/22/77-19-	25-15.8-C-	6.8-	1100-	6-1-6-	-	-	-	-	-4-3-2-2-	-9-1-	6-100-75-	1.32																					
08-37.1314-103.2369-2-08-	0-C30745-09/20/77-19-	28-15.2-C-	6.5-	550-	9-1-1-	-	-	-	-	-4-3-2-1-	-9-1-	6-75-50-	3.02																					
08-37.2408-103.1275-2-08-	0-C30746-09/22/77-13-	31-16.5-C-	6.5-	600-	6-1-6-	-	-	-	-	-4-3-2-2-	-9-1-	6-300-250-	3.40																					
08-37.2333-103.2092-2-08-	0-C30747-09/22/77-13-	31-14.5-C-	6.4-	1050-	6-1-6-	-	-	-	-	-4-3-2-2-	-9-1-	6-100-50-	5.85																					
08-37.2072-103.1417-2-08-	0-C30748-09/22/77-14-	31-15.3-C-	6.8-	1420-	6-1-6-	-	-	-	-	-4-3-2-2-	-9-1-	6-250-200-	4.11																					
08-37.2025-103.2239-2-08-	0-C30750-09/22/77-15-	29-16.5-C-	6.4-	1000-	5-1-6-	-	-	-	-	-4-3-2-2-	-9-1-	6-200-150-	25.70*																					
08-37.1850-103.2031-2-08-	0-C3																																	

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.2489-103.4106-2-08-						0-C30719	87721	86	-25	-4	72	59802	62	31	78	570	21	861	
08-37.2331-103.4847-2-08-						0-C30721	194000	215	-25	-4	27616	172000	540	-25	261	981	33	223	
08-37.1772-103.3806-2-08-						0-C30722	61029	-55	-25	-4	225	27331	7	31	99	326	21	-50	
08-37.1519-103.3794-2-08-						0-C30723	44058	-55	48	-4	84	13000	7	42	148	472	20	87	
08-37.1339-103.4553-2-08-						0-C30726	44615	-55	34	-4	-25	17835	4	56	58	423	20	214	
08-37.1311-103.4811-2-08-						0-C30727	48387	-55	-25	-4	77	16131	6	36	80	-200	20	187	
08-37.1417-103.0953-2-06-						0-C30729	55973	254	29	-4	141	15769	767	121	348	608	5	352	
08-37.1483-103.1128-2-08-						0-C30730	43104	242	26	-4	269	11885	32	99	234	446	6	614	
08-37.2414-103.3486-2-08-						0-C30731	10783	189	40	-4	1232	6861	60	90	254	-200	-4	5365	
08-37.1975-103.3531-2-08-						0-C30732	85814	267	-25	-4	466	37992	34	120	281	1144	12	529	
08-37.1667-103.3533-2-08-						0-C30733	41603	249	-25	-4	126	13823	18	125	277	481	-4	480	
08-37.1850-103.3158-2-08-						0-C30736	31729	249	-25	-4	258	12441	20	134	249	541	-4	461	
08-37.1728-103.2897-2-08-						0-C30737	32589	225	-25	-4	178	17897	19	117	227	433	-4	301	
08-37.1361-103.3317-2-07-						0-C30738	63129	242	-25	-4	148	35847	29	123	271	944	-4	430	
08-37.1453-103.2558-2-08-						0-C30739	14190	219	-25	-4	142	11592	17	94	195	-200	-4	384	
08-37.2503-103.2628-2-08-						0-C30743	43567	198	-25	-4	225	11307	17	137	259	609	-4	401	
08-37.2344-103.2872-2-08-						0-C30744	45178	257	-25	-4	173	30567	38	161	238	888	-4	414	
08-37.1314-103.2369-2-08-						0-C30745	50800	223	-25	-4	218	14136	15	70	127	302	-4	271	
08-37.2408-103.1275-2-08-						0-C30746	51900	215	-25	-4	137	11538	19	69	151	-200	-4	327	
08-37.2333-103.2092-2-08-						0-C30747	127000	268	-25	-4	214	28011	18	106	222	1094	-4	352	
08-37.2072-103.1417-2-08-						0-C30748	141000	288	-25	-4	282	38182	19	155	218	1736	-4	466	
08-37.2025-103.2239-2-08-						0-C30750	56240	297	60	-4	290	35054	34	263	456	1671	23	480	
08-37.1850-103.2031-2-08-						0-C30751	50870	270	89	-4	178	11726	19	214	476	1168	21	339	
08-37.1836-103.2278-2-08-						0-C30752	44203	-55	-25	-4	82	14602	6	115	32	1088	14	-50	
08-37.2417-103.2378-2-08-						0-C30753	59606	57	-25	-4	100	56595	4	139	34	1840	17	105	
08-37.1278-103.1419-2-08-						0-C30754	30874	-55	-25	-4	1340	14108	51	92	88	955	10	119	
08-37.1475-103.1486-2-08-						0-C30755	45548	73	-25	-4	65	33024	-3	125	61	1300	11	96	
08-37.1747-103.1536-2-07-						0-C30757	13880	-55	-25	-4	699	2214	94	46	39	286	16	60	
08-37.1250-103.1706-2-07-						0-C30758	40522	-55	-25	-4	31	15933	11	118	-25	943	7	-50	
08-37.2250-103.1217-2-08-						0-C30760	51134	-55	-25	-4	61	13214	4	107	45	1197	11	181	
08-37.2083-103.0983-2-08-						0-C30761	68247	-55	-25	-4	60	21956	10	83	-25	1222	9	439	
08-37.1358-103.0164-2-07-						0-C30762	46192	-55	-25	-4	37	19397	31	110	35	1071	10	-50	
08-37.1489-103.0078-2-08-						0-C30763	42978	-55	-25	-4	-25	17347	6	83	-25	927	10	90	
08-37.1478-103.0244-2-08-						0-C30764	72362	63	-25	-4	-25	33915	34	65	-25	1149	11	138	
08-37.1661-103.0314-2-07-						0-C30765	56507	-55	-25	-4	38	17299	16	52	61	934	11	-50	
08-37.1642-103.0336-2-06-						0-C30766	46245	-55	-25	-4	-25	11951	-3	34	29	723	7	-50	
08-37.1492-103.0364-2-06-						0-C30767	42354	-55	-25	-4	41	10615	5	34	-25	674	9	-50	
08-37.1792-103.0419-2-06-						0-C30768	81030	63	-25	-4	34	18832	35	37	-25	960	11	-50	
08-37.1894-103.0581-2-08-						0-C30769	63925	67	-25	-4	-25	17243	8	40	-25	837	12	-50	
08-37.2000-103.0125-2-08-						0-C30771	52675	-55	-25	-4	49	22917	8	-25	29	814	9	481	
08-37.1978-103.0383-2-06-						0-C30772	60118	-55	-25	-4	-25	39699	-3	47	27	1216	12	-50	
08-37.2297-103.0314-2-08-						0-C30773	63553	-55	-25	-4	70	19325	4	-25	-25	706	13	593	
08-37.2369-103.0689-2-08-						0-C30774	53127	-55	-25	18	46	17559	-3	-25	29	796	12	168	
08-37.1344-103.0861-2-07-						0-C30775	54952	-55	-25	-4	32	16368	6	-25	42	604	15	-50	
08-37.1589-103.0767-2-08-						0-C30776	47425	-55	-25	-4	105	9914	6	-25	45	459	9	85	
08-37.0919-103.9586-2-08-						0-C30778	99075	79	-25	-4	22466	41230	171	-25	111	1137	9	215	
08-37.0786-103.9328-2-08-						0-C30779	104000	-55	-25	-4	280	36467	180	-25	-25	690	11	-50	
08-37.1031-103.8825-2-08-						0-C30780	122000	83	-25	-4	65	34943	5	-25	50	887	13	-50	
08-37.0511-103.9103-2-08-						0-C30781	143000	103	-25	-4	64	50793	-3	-25	36	1161	15	155	
08-37.0433-103.8783-2-08-						0-C30783	168000	93	-25	-4	1949	41693	46	-25	151	597	23	437	
08-37.0047-103.9944-2-06-						0-C30784	308000	142	-25	-4	186	81386	85	-25	166	925	34	-50	

08-37.0300-103.9583-2-08-	0-C30785-07/22/77-10-	25-16.0-C-	7.6-	2250-	3-1-1-	-	-	-	-	-4-3-3-2-	-9-1-	8-150-120-	0.25	
08-37.0222-103.9067-2-08-	0-C30786-07/22/77-10-	25-13.0-C-	7.2-	1580-	10-1-1-	-	-	-	-	-4-3-3-2-	-9-1-	8-150-120-	25.34	
08-37.0506-103.9814-2-08-	0-C30787-07/22/77-11-	28-14.0-C-	7.6-	1750-	6-1-1-	-	-	-	-	-4-3-3-2-	-9-1-	8-130-100-	2.84	
08-37.1028-103.9828-2-08-	0-C30789-07/22/77-12-	28-16.2-C-	7.4-	880-	10-1-1-	-	-	-	-	-4-2-2-2-	-9-1-	8-150-125-	0.41	
08-37.0650-103.7594-2-08-	0-C30790-07/25/77-10-	26-13.0-C-	7.2-	1800-	11-1-1-	-	-	-	-	-4-3-2-2-	-9-1-	6-100-75-	5.28	
08-37.0994-103.8472-2-08-	0-C30791-07/22/77-15-	25-13.0-C-	7.7-	1390-	11-1-1-	-	-	-	-	-4-3-2-2-	-9-1-	8-200-150-	9.03	
08-37.1181-103.8675-2-08-	0-C30792-07/22/77-15-	25-13.0-C-	7.9-	840-	10-1-1-	-	-	-	-	-4-2-2-2-	-9-1-	8-200-150-	9.98	
08-37.0533-103.8675-2-08-	0-C30793-07/22/77-16-	26-16.0-C-	7.9-	800-	9-1-1-	-	-	-	-	-4-3-1-2-	-9-1-	8-200-150-	0.83	
08-37.0308-103.8669-2-08-	0-C30794-07/22/77-16-	25-14.2-C-	7.8-	2350-	11-1-1-	-	-	-	-	-4-3-2-2-	-9-1-	8-200-150-	3.37	
08-37.0367-103.8561-2-08-	0-C30795-07/23/77-10-	25-14.9-C-	7.1-	1900-	8-1-1-	-	-	-	-	-4-3-3-1-	-9-1-	8-200-150-	1.85	
08-37.0294-103.8064-2-08-	0-C30797-07/23/77-12-	30-14.0-C-	7.5-	1350-	11-1-1-	-	-	-	-	-4-3-1-2-	-9-1-	8-200-150-	0.83	
08-37.0450-103.8122-2-08-	0-C30798-07/23/77-12-	31-17.5-C-	7.4-	1390-	12-1-1-	-	-	-	-	-3-3-1-2-	-9-1-	8-200-150-	0.43	
08-37.0697-103.8286-2-08-	0-C30799-07/23/77-12-	30-16.2-C-	7.3-	3300-	8-1-1-	-	-	-	-	-4-3-1-2-	-1-1-	6-70-60-	19.10	
08-37.0683-103.8489-2-08-	0-C30800-07/23/77-13-	31-14.5-C-	7.3-	1000-	4-1-1-	-	-	-	-	-4-3-2-2-	-9-1-	8-200-150-	8.00	
08-37.1075-103.7714-2-08-	0-C30802-07/23/77-15-	32-15.5-C-	7.4-	700-	5-1-1-	-	-	-	-	-4-3-3-2-	-9-1-	8-200-150-	4.45	
08-37.1236-103.7578-2-08-	0-C30803-07/23/77-15-	28-16.0-C-	7.3-	950-	4-1-1-	-	-	-	-	-4-3-2-2-	-9-1-	8-475-600-	3.11	
08-37.0717-103.7469-2-08-	0-C30805-07/25/77-10-	26-14.0-C-	7.2-	2100-	9-1-1-	-	-	-	-	-4-3-2-2-	-9-1-	6-100-75-	28.02*	
08-37.0161-103.7211-2-08-	0-C30806-07/25/77-11-	29-14.6-C-	7.3-	740-	10-1-1-	-	-	-	-	-4-3-2-2-	-9-2-	8-350-300-	1.39	
08-37.0514-103.7161-2-08-	0-C30809-07/25/77-12-	27-19.0-C-	7.4-	900-	9-1-2-	-	-	-	-	-4-3-2-2-	-3-1-	6-65-40-	0.62	
08-37.0369-103.6936-2-08-	0-C30310-07/25/77-13-	25-14.0-C-	7.3-	630-	13-1-1-	-	-	-	-	-4-3-2-2-	-9-2-	6-40-19-	14.90	
08-37.0378-103.7058-2-08-	0-C30811-07/25/77-14-	27-15.2-C-	7.4-	720-	9-1-2-	-	-	-	-	-4-3-2-2-	-9-1-	6-225-175-	0.76	
08-37.0914-103.6881-2-06-	0-C30816-07/25/77-16-	27-16.5-C-	7.7-	1400-	6-1-1-5-8-2-2-1-	-	-	-	-	-4-3-2-2-	-3-	-	5.09	
08-37.1147-103.7181-2-06-	0-C30817-07/26/77-10-	23-16.5-C-	7.6-	480-	4-1-7-7-8-	-1-	-	-	-	-2-1-3-4-2-	-3-	-	0.76	
08-37.1044-103.6631-2-06-	0-C30818-07/26/77-12-	27-21.5-C-	7.8-	400-	3-1-	-4-6-1-	-1-3-1-3-4-2-	-9-	-	-	-	-	0.57	
08-37.0803-103.6333-2-06-	0-C30819-07/26/77-13-	27-18.2-C-	7.5-	680-	7-1-1-	-	-1-	-1-	-	-1-3-3-2-	-9-	-	1.31	
08-37.0972-103.5628-2-08-	0-C30821-07/28/77-16-	27-19.0-C-	8.0-	390-	9-3-8-	-	-	-	-	-4-3-2-2-	-9-1-	6-250-200-	1.58	
08-37.0361-103.5978-2-08-	0-C30823-07/26/77-15-	33-26.4-C-	7.6-	850-	5-1-2-	-	-	-	-	-3-3-4-2-	-9-1-	6-75-30-	2.59	
08-37.0150-103.5706-2-08-	0-C30825-07/26/77-16-	32-20.0-C-	6.7-	1550-	10-1-2-	-	-	-	-	-4-3-4-2-	-9-1-	6-75-50-	5.11	
08-37.0211-103.5536-2-06-	0-C30827-07/26/77-16-	28-26.2-C-	7.9-	800-	5-1-2-5-8-1-1-2-3-2-3-4-3-	-3-	-	-	-	-	-	-	1.37	
08-37.0675-103.5578-2-06-	0-C30833-07/27/77-16-	29-23.5-C-	7.1-	550-	5-1-2-	-	-	-	-	-2-	-3-4-4-2-	-3-	-	0.19
08-37.0514-103.5267-2-08-	0-C30835-07/27/77-17-	28-17.0-C-	7.3-	680-	7-1-2-	-	-	-	-	-1-3-4-2-	-9-1-	6-100-50-	3.15	
08-37.0053-103.5119-2-06-	0-C30836-07/23/77-11-	29-29.6-C-	7.4-	550-	7-1-7-5-9-	-	-	-	-	-1-3-4-1-	-3-	-	0.45	
08-37.0336-103.5056-2-08-	0-C30842-07/23/77-13-	32-24.0-C-	7.2-	500-	5-1-4-	-	-	-	-	-3-2-4-2-	-9-1-	6-100-50-	0.90	
08-37.1108-103.5169-2-08-	0-C30843-07/28/77-16-	27-17.8-C-	7.5-	620-	5-3-8-	-	-	-	-	-4-3-3-2-	-9-1-	6-300-200-	0.01	
08-37.0192-103.4356-2-08-	0-C30845-07/28/77-14-	28-15.8-C-	7.2-	540-	7-3-8-	-	-	-	-	-4-3-1-2-	-9-1-	6-200-150-	1.98	
08-37.0611-103.4869-2-08-	0-C30847-07/28/77-15-	28-16.0-C-	7.4-	390-	5-3-8-	-	-	-	-	-4-3-2-2-	-9-1-	6-250-200-	0.90	
08-37.1197-103.4792-2-08-	0-C30848-09/19/77-12-	25-16.5-C-	7.0-	550-	4-3-9-	-	-	-	-	-1-3-3-2-	-9-1-	6-250-150-	1.63	
08-37.0833-103.4489-2-08-	0-C30849-09/19/77-13-	29-15.6-C-	7.1-	550-	11-3-8-	-	-	-	-	-4-3-2-2-	-9-1-	6-250-200-	1.46	
08-37.0594-103.4011-2-08-	0-C30850-09/19/77-13-	29-15.7-C-	6.8-	650-	6-	-	-	-	-	-1-2-3-2-	-9-1-	6-300-200-	2.48	
08-37.0400-103.4308-2-06-	0-C30852-09/19/77-14-	31-15.5-C-	6.9-	550-	6-1-2-5-6-2-3-1-2-1-3-4-2-	-3-	-	-	-	-	-	-	1.46	
08-37.0519-103.3822-2-06-	0-C30853-09/19/77-15-	31-22.0-C-	6.6-	720-	6-1-9-5-6-1-2-1-2-1-3-4-2-	-3-	-	-	-	-	-	-	1.37	
08-37.0911-103.4167-2-08-	0-C30855-09/19/77-17-	29-15.2-C-	6.8-	700-	6-1-1-	-	-	-	-	-4-3-3-2-	-9-1-	6-150-100-	1.89	
08-37.1114-103.4153-2-07-	0-C30856-09/19/77-18-	28-17.5-C-	6.3-	670-	5-1-1-7-6-2-3-1-2-1-2-3-2-	-3-	-	-	-	-	-	-	2.75	
08-37.1236-103.3919-2-06-	0-C30857-09/20/77-11-	29-19.5-C-	7.4-	550-	4-1-2-4-6-1-2-2-2-1-2-3-1-	-3-	-	-	-	-	-	-	0.78	
08-37.0067-103.3842-2-06-	0-C30858-09/21/77-11-	29-17.5-C-	6.8-	690-	5-1-4-7-6-1-2-1-2-1-2-4-1-	-3-	-	-	-	-	-	-	0.34	
08-37.0142-103.3997-2-07-	0-C30859-09/21/77-11-	30-19.0-C-	7.0-	690-	5-1-4-7-9-2-1-2-1-2-2-3-4-1-	-3-	-	-	-	-	-	-	0.64	
08-37.0144-103.3681-2-08-	0-C30861-09/21/77-13-	32-19.8-C-	6.7-	900-	4-1-4-	-	-	-	-	-1-3-4-1-	-9-1-	6-150-100-	0.55	
08-37.0953-103.3447-2-06-	0-C30862-09/19/77-16-	29-19.5-C-	6.6-	600-	5-1-2-5-6-2-3-2-2-1-2-3-2-	-3-	-	-	-	-	-	-	0.34	
08-37.0931-103.3700-2-08-	0-C30863-09/19/77-17-	29-15.0-C-	6.8-	600-	9-1-1-	-	-	-	-	-4-3-2-2-	-9-1-	6-150-100-	1.56	
08-37.1214-103.3431-2-08-	0-C30864-09/20/77-14-	32-23.8-C-	6.9-	650-	7-1-2-	-	-	-	-	-1-3-3-1-	-9-1-	6-130-100-	2.13	
08-37.1089-103.3183-2-07-	0-C30865-09/20/77-15-	32-20.5-C-	6.6-	550-	4-1-1-	-6-2-3-2-2-1-3-3-1-	-3-	-	-	-	-	-	2.13	

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS. SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.0300-103.9583-2-08-						0-C30785	297000	147	-25	-4	629	135000	111	-25	176	1273	30	274	
08-37.0222-103.9067-2-08-						0-C30786	284000	141	-25	-4	135	76756	15	-25	204	373	35	-50	
08-37.0506-103.9814-2-08-						0-C30787	345000	153	-25	-4	172	148000	42	-25	186	491	36	116	
08-37.1028-103.9828-2-08-						0-C30789	164000	76	-25	-4	6249	54526	59	-25	180	621	25	1216	
08-37.0650-103.7694-2-08-						0-C30790	638000	207	-25	-4	234	94652	30	-25	272	-200	52	109	
08-37.0994-103.8472-2-08-						0-C30791	343000	140	-25	-4	184	91676	13	-25	269	455	36	-50	
08-37.1181-103.8675-2-08-						0-C30792	163000	90	-25	-4	90	44491	10	-25	218	465	23	103	
08-37.0533-103.8675-2-08-						0-C30793	117000	100	-25	-4	89	48442	42	-25	195	686	19	217	
08-37.0308-103.8669-2-08-						0-C30794	434000	224	-25	-4	34992	229000	404	-25	378	1635	44	268	
08-37.0067-103.8561-2-08-						0-C30795	371000	172	-25	-4	818	171000	98	-25	264	464	38	18673	
08-37.0294-103.8064-2-08-						0-C30797	37870	-55	-25	-4	67187	33166	557	-25	325	499	17	1009	
08-37.0450-103.8122-2-08-						0-C30798	76450	64	-25	-4	1572	62091	80	-25	210	610	21	338	
08-37.0697-103.8286-2-08-						0-C30799	630000	249	-25	-4	233	277000	24	-25	368	961	57	567	
08-37.0683-103.8489-2-08-						0-C30800	262000	100	-25	-4	252	56649	15	-25	243	-200	31	337	
08-37.1075-103.7714-2-08-						0-C30802	193000	79	-25	-4	119	32619	14	-25	212	-200	23	78	
08-37.1236-103.7578-2-08-						0-C30803	296000	104	-25	-4	1081	67390	99	-25	209	-200	29	6035	
08-37.0717-103.7469-2-08-						0-C30805	623000	231	-25	-4	171	99446	12	-25	376	-200	50	199	
08-37.0161-103.7211-2-08-						0-C30806	160000	58	-25	-4	8725	57351	59	-25	204	220	25	256	
08-37.0514-103.7161-2-08-						0-C30809	224000	98	-25	-4	960	81441	262	-25	265	410	29	1333	
08-37.0369-103.6936-2-08-						0-C30810	178000	59	-25	-4	111	30959	10	-25	211	-200	21	69	
08-37.0378-103.7058-2-08-						0-C30811	115000	60	-25	-4	2914	49493	86	-25	268	388	20	544	
08-37.0914-103.6881-2-06-						0-C30816	345000	141	-25	-4	102	66991	13	-25	296	-200	42	-50	
08-37.1147-103.7181-2-06-						0-C30817	113000	-55	-25	-4	73	27028	10	-25	191	-200	22	-50	
08-37.1044-103.6631-2-06-						0-C30818	101000	61	32	-4	62	19690	18	-25	258	377	25	-50	
08-37.0803-103.6333-2-06-						0-C30819	164000	63	-25	-4	120	30586	24	-25	234	-200	24	-50	
08-37.0972-103.5628-2-08-						0-C30821	44864	72	-25	-4	35	13049	6	41	-25	590	16	544	
08-37.0361-103.5878-2-08-						0-C30823	36830	88	-25	-4	53	35303	5	-25	34	1058	20	98	
08-37.0150-103.5706-2-08-						0-C30825	231000	208	252	-4	712	48908	29	117	686	3528	87	885	
08-37.0211-103.5536-2-06-						0-C30827	94500	-55	-25	-4	27	25912	91	-25	-25	1100	17	409	
08-37.0675-103.5578-2-06-						0-C30833	82215	75	59	-4	37	11552	55	40	52	958	26	-50	
08-37.0514-103.5267-2-08-						0-C30835	78900	80	43	-4	53	26503	4	55	109	1193	28	275	
08-37.0053-103.5119-2-06-						0-C30836	46970	107	188	-4	165	20158	902	220	457	2152	60	574	
08-37.0336-103.5056-2-08-						0-C30842	56840	80	50	-4	64	19165	13	75	35	1110	22	349	
08-37.1108-103.5169-2-08-						0-C30843	23961	76	78	-4	-25	24210	49	232	191	1076	20	-50	
08-37.0192-103.4356-2-08-						0-C30845	57130	139	331	-4	129	15888	24	409	873	3067	90	450	
08-37.0611-103.4869-2-08-						0-C30847	40912	-55	-25	-4	46	12216	-3	-25	-25	448	8	435	
08-37.1197-103.4792-2-08-						0-C30848	36398	-55	-25	-4	54	15409	-3	-25	-25	-200	-4	186	
08-37.0833-103.4489-2-08-						0-C30849	33558	-55	-25	-4	204	11929	-3	-25	-25	409	9	-50	
08-37.0594-103.4011-2-08-						0-C30850	65089	-55	-25	-4	-25	10334	-3	-25	-25	338	-4	325	
08-37.0400-103.4308-2-06-						0-C30852	35596	-55	53	-4	51	12404	9	78	-25	805	14	-50	
08-37.0519-103.3822-2-06-						0-C30853	80518	-55	-25	-4	34	28368	15	-25	-25	761	8	-50	
08-37.0911-103.4167-2-08-						0-C30855	41184	-55	-25	-4	51	14832	-3	-25	-25	397	6	-50	
08-37.1114-103.4153-2-07-						0-C30856	57362	-55	-25	-4	35	19298	7	-25	-25	469	-4	-50	
08-37.1236-103.3919-2-06-						0-C30857	40211	-55	-25	-4	69	12408	22	47	-25	674	27	108	
08-37.0067-103.3842-2-06-						0-C30858	57064	-55	-25	-4	27	23223	8	-25	-25	523	7	96	
08-37.0142-103.3997-2-07-						0-C30859	58903	56	-25	-4	64	22674	6	47	-25	816	6	-50	
08-37.0144-103.3681-2-08-						0-C30861	67569	75	-25	-4	149	43998	5	70	-25	1239	16	-50	
08-37.0953-103.3447-2-06-						0-C30862	53062	56	-25	-4	52	9526	381	-25	-25	425	8	-50	
08-37.0931-103.3700-2-08-						0-C30863	47843	84	-25	-4	99	15662	9	33	-25	577	7	189	
08-37.1214-103.3431-2-08-						0-C30864	68970	127	-25	-4	-25	14167	18	-25	-25	402	11	356	
08-37.1089-103.3183-2-07-						0-C30865	42115	103	-25	-4	45	16599	7	42	-25	522	6	121	

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

①

DOE SAMPLE NUMBER						LASI SAMPLE LOCATION NUMBER AND FIELD DATA																				U CONCENTRATION								
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASI SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (µmho/cm)	SCINTILLOMETER (eU, ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (66) UNITS IN ppb
							DATE	HOUR																										
08-37.1042-103.3183-2-07-						0-C30866-09/20/77-16-			32-21.6-C-	- 7.2-	600-					4-1-2-4-6-2-3-2-3-2-2-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.62
08-37.1014-103.2786-2-07-						0-C30867-09/20/77-16-			31-20.0-C-	- 7.3-	800-					5-1-2-4-6-2-3-1-2-4-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.36
08-37.0081-103.3492-2-08-						0-C30869-09/21/77-12-			31-24.5-C-	- 7.2-	900-					3-1-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.26
08-37.0089-103.3033-2-08-						0-C30870-09/21/77-14-			32-16.2-C-	- 6.7-	800-					4-1-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50
08-37.0094-103.2581-2-08-						0-C30873-09/21/77-15-			32-21.0-C-	- 7.4-	650-					5-1-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.62
08-37.0614-103.3253-2-08-						0-C30877-09/21/77-19-			26-18.0-C-	- 7.2-	460-					6-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.50
08-37.0833-103.2528-2-08-						0-C30878-10/03/77-12-			26-16.5-C-	- 6.6-	800-					8-3-8-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20
08-37.0650-103.2508-2-08-						0-C30879-10/03/77-13-			27-16.2-C-	- 7.0-	780-					6-1-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00
08-37.1058-103.2286-2-07-						0-C30880-09/20/77-17-			30-21.2-C-	- 7.2-	940-					5-1-2-7-6-2-3-2-1-2-2-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.20	
08-37.1064-103.1908-2-07-						0-C30881-09/20/77-12-			29-20.7-C-	- 7.0-	1000-					5-1-2-5-6-2-3-2-3-2-2-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.34	
08-37.0119-103.1825-2-08-						0-C30882-09/21/77-16-			32-16.0-C-	- 6.7-	700-					5-1-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.04
08-37.0147-103.1869-2-07-						0-C30883-09/21/77-16-			31-23.5-C-	- 7.0-	800-					5-1-4-5-6-2-2-2-1-3-4-4-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.78	
08-37.0408-103.2214-2-08-						0-C30885-09/21/77-19-			30-15.8-C-	- 6.6-	700-					5-1-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.24
08-37.0072-103.1331-2-08-						0-C30887-10/03/77-11-			23-20.3-C-	- 7.6-	650-					8-3-8-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.08
08-37.0678-103.2136-2-08-						0-C30888-10/03/77-12-			24-16.8-C-	- 6.8-	630-					11-3-8-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.81
08-37.0525-103.1453-2-08-						0-C30889-10/03/77-14-			28-15.6-C-	- 6.8-	680-					7-1-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.36
08-37.0561-103.1431-2-06-						0-C30890-10/03/77-15-			28-18.2-C-	-	-					3-1-2-7-6-1-2-1-2-1-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.26	
08-37.0719-103.1472-2-08-						0-C30891-10/03/77-15-			28-15.5-C-	- 6.8-	530-					5-1-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.01
08-37.0853-103.1267-2-08-						0-C30892-10/03/77-16-			27-16.8-C-	- 7.1-	920-					7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35.50*
08-37.1033-103.1350-2-07-						0-C30893-10/04/77-19-			29-18.2-C-	- 7.6-	950-					5-1-1-4-6-1-2-1-1-3-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.60	
08-37.1086-103.1561-2-07-						0-C30894-10/04/77-19-			28-19.8-C-	- 7.8-	950-					5-1-2-7-9-2-2-1-1-3-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.01	
08-37.0150-103.0058-2-08-						0-C30895-10/03/77-10-			20-15.2-C-	- 7.1-	930-					4-1-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.73
08-37.0217-103.0419-2-08-						0-C30896-10/03/77-10-			21-22.2-C-	- 7.2-	860-					5-1-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.03
08-37.0108-103.0867-2-08-						0-C30897-10/03/77-11-			22-14.8-C-	-	-					6-1-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.61
08-37.0669-103.0942-2-08-						0-C30898-10/03/77-16-			27-15.2-C-	- 7.0-	740-					5-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.65
08-37.0483-103.0994-2-06-						0-C30899-10/03/77-17-			26-19.5-C-	- 7.3-	660-					3-1-1-7-6-2-3-1-2-3-4-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.79	
08-37.0408-103.0864-2-07-						0-C30901-10/03/77-18-			25-17.5-C-	- 7.7-	640-					4-1-1-5-6-1-2-1-2-4-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.02	
08-37.0294-103.0258-2-07-						0-C30903-10/04/77-9-			27-14.2-C-	- 7.4-	880-					5-1-1-4-6-2-3-1-1-2-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.78	
08-37.0319-103.0428-2-06-						0-C30904-10/04/77-9-			28-16.5-C-	- 7.1-	830-					6-1-1-4-6-3-3-1-2-2-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.02	
08-37.0333-103.0542-2-07-						0-C30905-10/04/77-10-			29-17.2-C-	- 7.4-	750-					5-1-1-4-6-2-3-1-1-2-2-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.61	
08-37.0664-103.0092-2-06-						0-C30906-10/04/77-11-			30-17.5-C-	- 7.8-	900-					4-1-1-4-9-1-2-2-1-2-2-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.22	
08-37.0622-103.0178-2-07-						0-C30907-10/04/77-11-			30-18.8-C-	- 7.4-	1050-					4-1-1-4-6-2-2-1-1-2-2-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.33	
08-37.0644-103.0367-2-08-						0-C30908-10/04/77-11-			30-18.0-C-	- 7.0-	800-					6-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.24
08-37.0878-103.0692-2-08-						0-C30910-10/04/77-14-			31-17.2-C-	- 6.7-	800-					8-1-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.19
08-37.0975-103.0583-2-08-						0-C30911-10/04/77-14-			32-21.0-C-	- 6.9-	1250-					6-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.67
08-37.1042-103.0800-2-07-						0-C30913-10/04/77-15-			32-21.0-C-	- 7.7-	970-					5-1-1-7-9-1-2-5-2-2-2-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.28	
08-37.1172-103.1122-2-07-						0-C30914-10/04/77-17-			30-21.2-C-	- 7.4-	950-					5-1-1-7-9-2-2-1-1-4-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.98	
08-37.0992-103.0328-2-07-						0-C30916-10/04/77-10-			26-18.0-C-	- 7.5-	725-					7-1-3-4-6-2-2-1-2-4-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.60	
08-37.9789-102.5478-2-08-						0-C30917-07/26/77-11-			29-18.5-C-	- 6.7-	160-					-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23
08-37.9375-102.5558-2-08-						0-C30918-07/26/77-11-			-18.0-C-	- 6.7-	235-					-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.65
08-37.9178-102.5564-2-08-						0-C30919-07/26/77-11-			27-18.0-C-	- 6.9-	155-					-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.67
08-37.8833-102.5536-2-08-						0-C30920-07/26/77-12-			28-19.0-C-	- 7.2-	925-					-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21
08-37.8786-102.5703-2-08-						0-C30921-07/26/77-12-			28-23.0-C-	- 6.7-	155-					-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03
08-37.8964-102.5742-2-08-						0-C30922-07/26/77-12-			28-17.0-C-	- 6.6-	112-					-1-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.27
08-37.9064-102.5119-2-08-						0-C30926-07/27/77-16-			31-17.0-C-	- 7.1-	90-					-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.62
08-37.9372-102.5025-2-08-						0-C30927-07/27/77-16-																												

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.1042-103.3183-2-07-	0-C30866	45765	82	-25	-4	55	16949	8	-25	-25	468	6	193						
08-37.1014-103.2786-2-07-	0-C30867	66509	134	-25	-4	45	38409	10	-25	-25	573	9	109						
08-37.0081-103.3492-2-08-	0-C30869	21153	61	-25	-4	37	19889	6	44	-25	235	6	-50						
08-37.0089-103.3033-2-08-	0-C30870	71798	106	-25	-4	69	38765	4	-25	-25	618	5	-50						
08-37.0094-103.2581-2-08-	0-C30873	52166	129	-25	-4	37	58677	8	108	-25	1260	21	98						
08-37.0614-103.3253-2-08-	0-C30877	32803	83	-25	-4	40	12683	-3	-25	-25	-200	7	85						
08-37.0833-103.2528-2-08-	0-C30878	65680	143	-25	-4	63	36155	7	27	-25	905	13	165						
08-37.0650-103.2508-2-08-	0-C30879	85351	117	-25	-4	67	29259	19	-25	-25	514	10	422						
08-37.1058-103.2286-2-07-	0-C30880	64888	90	-25	-4	46	49002	25	-25	-25	612	8	126						
08-37.1064-103.1908-2-07-	0-C30881	61585	142	-25	-4	-25	53723	17	58	-25	959	16	178						
08-37.0119-103.1825-2-08-	0-C30882	71092	121	-25	-4	61	34622	4	-25	-25	647	10	242						
08-37.0147-103.1869-2-07-	0-C30883	82544	119	-25	-4	171	37632	67	-25	-25	629	8	55						
08-37.0408-103.2214-2-08-	0-C30885	61352	135	-25	-4	32	26836	7	-25	-25	722	6	91						
08-37.0072-103.1331-2-08-	0-C30887	39557	115	-25	-4	-25	33658	38	36	-25	877	23	179						
08-37.0678-103.2136-2-08-	0-C30888	56978	150	53	-4	77	23211	14	73	101	941	25	256						
08-37.0525-103.1453-2-08-	0-C30889	80617	145	26	-4	49	23266	10	-25	-25	579	17	443						
08-37.0561-103.1431-2-06-	0-C30890	30110	108	76	-4	116	2590	12	60	40	565	24	210						
08-37.0719-103.1472-2-08-	0-C30891	68966	137	58	-4	55	6887	10	-25	84	517	23	283						
08-37.0853-103.1267-2-08-	0-C30892	79227	150	-25	-4	41	43002	12	39	28	969	19	459						
08-37.1033-103.1350-2-07-	0-C30893	72685	143	-25	-4	38	47420	16	30	-25	835	19	343						
08-37.1086-103.1561-2-07-	0-C30894	67531	149	-25	-4	-25	48524	13	-25	-25	826	20	256						
08-37.0150-103.0058-2-08-	0-C30895	90990	150	-25	-4	36	68537	22	-25	-25	727	12	377						
08-37.0217-103.0419-2-08-	0-C30896	106000	141	-25	-4	66	35287	30	-25	-25	705	14	500						
08-37.0108-103.0867-2-08-	0-C30897	84136	180	39	-4	92	17482	13	-25	-25	674	16	169						
08-37.0669-103.0942-2-08-	0-C30898	80735	130	-25	-4	32	23008	6	-25	-25	425	6	60						
08-37.0483-103.0994-2-06-	0-C30899	73681	117	-25	-4	114	25862	27	-25	-25	563	13	-50						
08-37.0408-103.0864-2-07-	0-C30901	65094	127	-25	-4	-25	20453	13	-25	-25	305	7	142						
08-37.0294-103.0258-2-07-	0-C30903	93956	161	-25	-4	35	41195	24	-25	-25	663	11	131						
08-37.0319-103.0428-2-06-	0-C30904	105000	161	-25	-4	-25	32174	6	-25	-25	465	7	128						
08-37.0333-103.0542-2-07-	0-C30905	75332	129	-25	-4	36	23048	20	-25	-25	443	10	326						
08-37.0664-103.0092-2-06-	0-C30906	70502	135	-25	-4	26	42527	49	-25	-25	484	9	259						
08-37.0622-103.0178-2-07-	0-C30907	91056	148	-25	-4	34	52159	22	-25	-25	665	5	254						
08-37.0644-103.0367-2-08-	0-C30908	82504	148	-25	-4	48	38252	9	-25	-25	442	6	158						
08-37.0878-103.0692-2-08-	0-C30910	92871	155	-25	-4	639	33908	92	-25	-25	599	10	1510						
08-37.0975-103.0583-2-08-	0-C30911	108000	176	-25	-4	54	76000	12	-25	-25	1057	15	256						
08-37.1042-103.0800-2-07-	0-C30913	68851	165	-25	-4	42	49801	28	-25	-25	593	7	-50						
08-37.1172-103.1122-2-07-	0-C30914	60621	134	-25	-4	-25	47210	76	-25	-25	721	7	-50						
08-37.0992-103.0328-2-07-	0-C30916	78599	129	-25	-4	30	41818	418	-25	-25	447	-4	-50						
08-37.9789-102.5478-2-08-	0-C30917	201000	238	-25	-4	8171	86350	207	-25	-25	878	13	2237						
08-37.9375-102.5558-2-08-	0-C30918	305000	291	-25	-4	4357	145000	207	-25	-25	1360	20	350						
08-37.9178-102.5564-2-08-	0-C30919	191000	238	-25	-4	131	85538	24	-25	-25	690	8	258						
08-37.8833-102.5536-2-08-	0-C30920	109000	189	-25	-4	706	54372	28	-25	-25	693	12	102						
08-37.8786-102.5703-2-08-	0-C30921	139000	250	-25	-4	1426	103000	290	-25	-25	1045	11	413						
08-37.8964-102.5742-2-08-	0-C30922	132000	185	-25	-4	674	75576	104	-25	-25	1057	14	170						
08-37.9064-102.5119-2-08-	0-C30926	98055	143	-25	-4	331	54817	45	-25	-25	697	12	54						
08-37.9372-102.5025-2-08-	0-C30927	148000	207	-25	-4	62	61332	19	-25	-25	548	8	1457						
08-37.9833-102.5042-2-08-	0-C30929	165000	172	-25	-4	52	56910	25	-25	-25	672	14	460						
08-37.9292-102.5750-2-08-	0-C30930	78219	125	-25	-4	96	34930	44	-25	-25	514	10	239						
08-37.8900-102.6131-2-08-	0-C30931	74401	165	-25	-4	-25	13804	9	-25	-25	309	11	187						
08-37.7614-102.6228-2-08-	0-C30932	155000	222	-25	-4	126	58403	20	-25	-25	702	14	287						
08-37.8167-102.6164-2-08-	0-C30933	166000	217	-25	-4	1312	70759	226	-25	-25	909	16	4683						

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																	U CONCENTRATION											
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SOUNDING METER (m/s)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (6) UNITS IN PPB
							DATE	HOUR																										
08-37.8381-102.6103-2-08-	0-C30934-07/28/77-12-	30-17.0-C-	6.4-	1850-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
08-37.8264-102.5892-2-08-	0-C30935-07/28/77-13-	29-17.0-C-	7.0-	1400-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.11		
08-37.8411-102.5739-2-08-	0-C30937-07/28/77-14-	30-17.0-C-	7.4-	650-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.02		
08-37.8375-102.5697-2-07-	0-C30938-07/28/77-14-	28-32.0-C-	8.6-	115-	-1-6-6-6-1-2-3-2-	-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04			
08-37.7522-102.5331-2-08-	0-C30939-07/28/77-14-	31-17.0-C-	7.4-	1300-	-1-1-6-4-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.39			
08-37.7883-102.5553-2-08-	0-C30940-07/28/77-15-	31-17.0-C-	7.1-	800-	-1-6-4-6-	-1-	-4-3-1-2-	-1-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.27			
08-37.7811-102.5753-2-08-	0-C30941-07/28/77-16-	30-20.0-C-	7.0-	900-	-1-1-6-4-	-1-	-4-3-2-2-	-1-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.12			
08-37.7994-102.5697-2-08-	0-C30942-07/28/77-16-	31-16.0-C-	7.2-	700-	-1-6-4-6-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.15			
08-37.8422-102.5372-2-08-	0-C30943-07/28/77-17-	31-17.0-C-	7.0-	700-	-1-6-4-6-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.30			
08-37.8647-102.4986-2-08-	0-C30944-08/05/77-13-	31-15.0-C-	6.6-	800-	13-1-1-	-	-	-4-3-3-2-	-3-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.37		
08-37.8706-102.4800-2-08-	0-C30945-08/05/77-13-	31-16.0-C-	6.7-	700-	11-1-1-	-	-	-4-3-2-2-	-3-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70		
08-37.8569-102.4783-2-08-	0-C30946-08/05/77-14-	31-15.0-C-	7.2-	550-	9-1-1-	-	-	-4-3-3-2-	-3-3-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.54		
08-37.8386-102.4675-2-06-	0-C30947-08/05/77-15-	30-23.0-C-	7.9-	180-	3-1-1-4-5-1-2-5-2-	-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.29			
08-37.8233-102.4286-2-08-	0-C30948-08/05/77-16-	28-20.0-C-	7.0-	490-	13-1-1-	-	-	-4-4-2-3-	-1-3-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.30		
08-37.8406-102.3919-2-08-	0-C30949-08/05/77-16-	29-14.0-C-	7.0-	550-	27-1-1-	-	-	-4-4-2-3-	-1-1-6-	-																								

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.8381-102.6103-2-08-			0-C30934			238000	282	-25	-4	17852	136000	1350	-25	53	1399	21	214	214	
08-37.8264-102.5892-2-08-			0-C30935			124000	209	-25	-4	5774	47927	105	-25	-25	696	9	231	231	
08-37.8411-102.5739-2-08-			0-C30937			98063	182	-25	-4	82	32328	8	-25	-25	550	-4	249	249	
08-37.8375-102.5697-2-07-			0-C30938			21955	135	-25	-4	127	1917	10	56	-25	-200	-4	112	112	
08-37.7522-102.5331-2-08-			0-C30939			99243	173	-25	-4	3921	70549	154	-25	-25	759	-4	415	415	
08-37.7883-102.5553-2-08-			0-C30940			104000	172	-25	-4	53	34311	10	-25	-25	449	-4	607	607	
08-37.7811-102.5753-2-08-			0-C30941			109000	149	-25	-4	137	40847	20	-25	-25	520	8	666	666	
08-37.7994-102.5697-2-08-			0-C30942			71784	155	-25	-4	1340	25195	61	-25	-25	524	7	170	170	
08-37.8422-102.5372-2-08-			0-C30943			81945	200	-25	-4	498	28898	104	-25	-25	479	8	128	128	
08-37.8547-102.4986-2-08-			0-C30944			94664	161	-25	-4	8687	41083	283	-25	-25	509	9	1472	1472	
08-37.8706-102.4800-2-08-			0-C30945			98480	169	-25	-4	264	32849	11	-25	-25	292	-4	99	99	
08-37.8569-102.4783-2-08-			0-C30946			104000	157	-25	-4	163	16192	10	-25	-25	268	-4	225	225	
08-37.8386-102.4675-2-06-			0-C30947			37973	129	-25	-4	193	2854	17	-25	-25	-200	7	99	99	
08-37.8233-102.4286-2-08-			0-C30948			65153	123	-25	-4	37	14962	11	-25	-25	-200	-4	741	741	
08-37.8406-102.3919-2-08-			0-C30949			66592	188	59	-4	317	19561	64	119	144	975	20	647	647	
08-37.8233-102.3919-2-08-			0-C30950			96595	222	46	-4	32653	30417	76	120	172	1050	27	1684	1684	
08-37.8156-102.3797-2-08-			0-C30951			79285	212	59	-4	181	14020	18	97	68	828	17	550	550	
08-37.8225-102.5578-2-08-			0-C30952			82692	240	35	-4	70	39136	109	123	122	1161	19	369	369	
08-37.8575-102.5636-2-08-			0-C30953			112000	270	28	-4	557	52632	59	56	120	1257	27	441	441	
08-37.8683-102.5253-2-08-			0-C30954			143000	262	-25	-4	4733	60712	139	43	96	1454	23	185	185	
08-37.8639-102.5122-2-08-			0-C30955			115000	241	34	-4	590	50121	162	92	113	882	25	965	965	
08-37.7844-102.4964-2-08-			0-C30958			64516	222	34	-4	69	14760	9	131	30	618	16	220	220	
08-37.8161-102.5100-2-08-			0-C30959			75319	197	-25	-4	111	43358	16	95	-25	709	13	333	333	
08-37.8344-102.5064-2-08-			0-C30961			68435	209	54	-4	330	23388	124	127	91	757	26	176	176	
08-37.8581-102.4333-2-08-			0-C30962			127000	290	-25	-4	75	67785	14	35	77	795	23	1019	1019	
08-37.8717-102.3869-2-08-			0-C30963			124000	247	35	-4	400	39669	123	80	69	649	19	417	417	
08-37.8100-102.4242-2-08-			0-C30965			86617	232	-25	-4	174	18310	36	77	-25	356	14	384	384	
08-37.7733-102.4081-2-08-			0-C30966			59032	192	-25	-4	119	11310	8	78	-25	-200	8	259	259	
08-37.7547-102.4672-2-08-			0-C30967			81974	184	37	-4	6856	6858	79	83	-25	-200	11	344	344	
08-37.7169-102.4736-2-08-			0-C30968			95995	235	-25	-4	67	43018	11	143	35	876	18	668	668	
08-37.6942-102.4864-2-08-			0-C30969			93059	230	-25	-4	74	75428	41	136	82	1000	17	472	472	
08-37.6836-102.4481-2-08-			0-C30970			92556	226	-25	-4	128	47969	33	130	52	750	18	777	777	
08-37.6731-102.4764-2-08-			0-C30971			69046	191	27	-4	86	20880	15	94	58	462	18	723	723	
08-37.6544-102.4661-2-08-			0-C30972			88032	220	-25	-4	88	20833	11	77	-25	212	12	616	616	
08-37.6364-102.3914-2-08-			0-C30973			84372	255	35	-4	56	21197	13	137	-25	525	18	549	549	
08-37.6442-102.4317-2-08-			0-C30974			96595	235	-25	-4	79	23017	10	71	-25	312	15	296	296	
08-37.6589-102.4286-2-08-			0-C30975			128000	250	31	-4	74	25451	17	69	53	446	22	377	377	
08-37.6586-102.4481-2-08-			0-C30976			135000	304	48	-4	79	27593	18	101	62	691	18	764	764	
08-37.6731-102.4061-2-08-			0-C30977			150000	273	-25	-4	80	36594	13	85	64	719	24	175	175	
08-37.6883-102.3881-2-08-			0-C30978			85374	234	34	-4	127	15273	10	94	46	339	11	202	202	
08-37.7303-102.4008-2-07-			0-C30979			31067	199	55	-4	65	2221	18	132	-25	288	12	283	283	
08-37.7353-102.3831-2-08-			0-C30980			97407	211	-25	-4	57	23307	74	122	-25	460	8	692	692	
08-37.7256-102.4314-2-08-			0-C30981			63848	204	35	-4	68	19513	11	84	-25	340	12	277	277	
08-37.7006-102.4433-2-08-			0-C30982			60066	195	36	-4	109	24543	23	178	59	727	15	679	679	
08-37.6294-102.5292-2-08-			0-C30983			58853	218	32	-4	49	20719	14	176	30	649	12	921	921	
08-37.6731-102.5028-2-08-			0-C30984			55792	209	28	-4	66	25552	13	150	-25	597	10	1216	1216	
08-37.7153-102.5197-2-08-			0-C30985			60597	209	42	-4	52	4799	11	127	-25	338	5	394	394	
08-37.7161-102.5367-2-03-			0-C30986			423000	473	-25	-4	163	132000	24	-25	298	2084	51	643	643	
08-37.7375-102.5167-2-08-			0-C30988			142000	275	38	-4	78	49023	13	124	133	878	22	284	284	
08-37.7253-102.6028-2-08-			0-C30990			70061	263	-25	-4	176	39778	37	183	68	905	14	239	239	
08-37.7375-102.5764-2-08-			0-C30991			127000	251	54	-4	72	15982	11	129	89	626	18	288	288	

[illegible]

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.6903-102.5844-2-08-			0-C30992			41631	189	41	-4	78	18084	18	171	27	609	7	300		
08-37.6825-102.5639-2-08-			0-C30994			41199	197	44	-4	59	17246	10	172	-25	583	9	175		
08-37.6789-102.6389-2-08-			0-C30995			51238	223	47	-4	119	13529	10	189	93	666	11	208		
08-37.6956-102.6969-2-08-			0-C30997			49256	209	46	-4	887	16122	1517	194	61	665	6	193		
08-37.7103-102.6478-2-08-			0-C30998			109000	243	30	-4	301	42898	61	164	27	1067	16	219		
08-37.7436-102.6406-2-08-			0-C31000			103000	242	34	-4	13344	45046	1175	239	123	1251	18	357		
08-37.7439-102.6858-2-08-			0-C31001			73574	277	41	-4	40214	25296	2762	197	259	821	11	1375		
08-37.6583-102.6853-2-08-			0-C31003			43556	248	-25	-4	72	10709	15	111	-25	-200	-4	278		
08-37.6433-102.6672-2-08-			0-C31004			62304	207	-25	-4	45	13142	10	117	-25	-200	-4	367		
08-37.5642-102.4164-2-08-			0-C31005			70477	232	40	-4	163	18993	9	160	-25	553	7	261		
08-37.5931-102.4219-2-08-			0-C31006			52384	223	26	-4	84	17605	69	153	-25	376	9	270		
08-37.6006-102.3978-2-08-			0-C31007			58112	216	37	-4	139	21885	28	149	-25	550	8	404		
08-37.6231-102.3919-2-08-			0-C31008			71264	263	29	-4	132	21775	13	185	-25	706	9	146		
08-37.5856-102.4544-2-08-			0-C31009			47092	211	36	-4	42	13640	10	155	-25	426	7	133		
08-37.5592-102.4900-2-08-			0-C31010			72025	203	51	-4	112	10581	12	177	-25	503	9	194		
08-37.5783-102.4639-2-08-			0-C31011			41508	219	48	-4	52	9565	14	181	44	546	6	111		
08-37.5356-102.4364-2-08-			0-C31012			55467	201	53	-4	38	10913	13	161	73	567	9	405		
08-37.5128-102.4389-2-08-			0-C31013			40433	210	-25	-4	507	15127	104	137	-25	437	-4	350		
08-37.5108-102.4200-2-08-			0-C31014			49251	200	57	-4	134	19301	12	154	40	621	12	255		
08-37.5578-102.4014-2-08-			0-C31015			96478	248	-25	-4	53	27061	8	194	-25	857	12	638		
08-37.5856-102.4825-2-08-			0-C31016			43317	200	44	-4	42	9632	6	159	-25	408	7	-50		
08-37.6000-102.4686-2-08-			0-C31017			104000	250	41	-4	84	33861	10	234	95	1244	13	98		
08-37.6153-102.4744-2-08-			0-C31018			151000	296	-25	-4	93	56600	46	194	46	1377	16	1132		
08-37.6378-102.5381-2-08-			0-C31019			114000	282	41	-4	63	29937	92	181	70	822	13	110		
08-37.6453-102.5708-2-08-			0-C31020			83034	255	44	-4	58	23507	17	170	99	780	12	916		
08-37.6503-102.5903-2-08-			0-C31021			46415	221	66	-4	239	11007	13	181	145	601	9	202		
08-37.6728-102.7831-2-08-			0-C31022			104000	255	39	-4	203	18891	24	159	-25	840	11	1111		
08-37.7031-102.7817-2-08-			0-C31023			119000	267	-25	-4	252	40689	130	159	50	1135	6	5330		
08-37.6342-102.7722-2-08-			0-C31025			457000	553	-25	-4	160	224000	32	-25	282	3760	53	4522		
08-37.6564-102.8083-2-07-			0-C31028			15442	184	76	-4	252	1663	12	179	140	386	18	166		
08-37.6333-102.8164-2-08-			0-C31030			176000	327	75	-4	95	38308	15	186	148	1277	28	285		
08-37.6383-102.8739-2-08-			0-C31031			126000	275	93	-4	72	29575	46	249	233	1333	29	3818		
08-37.6283-102.8506-2-07-			0-C31032			169000	312	64	-4	60	33495	33	193	91	1141	17	389		
08-37.6522-102.8392-2-08-			0-C31034			152000	322	-25	-4	13438	95388	203	175	144	1636	20	3459		
08-37.6731-102.8011-2-08-			0-C31035			87643	227	41	-4	4013	47218	196	161	150	1076	16	2463		
08-37.7381-102.7708-2-08-			0-C31039			53275	207	50	-4	4740	29134	85	150	104	676	18	2071		
08-37.7472-102.7297-2-08-			0-C31040			123000	319	-25	-4	593	73460	409	129	86	1089	12	317		
08-37.7153-102.7394-2-08-			0-C31043			62448	242	57	-4	876	31141	145	186	121	790	14	1875		
08-37.6197-102.6128-2-08-			0-C31044			42427	227	54	-4	62	14097	12	200	53	644	10	496		
08-37.6958-102.5558-2-08-			0-C31045			64805	201	50	-4	54	19050	8	166	122	631	15	103		
08-37.6078-102.5294-2-08-			0-C31046			92376	301	56	-4	67	28744	16	191	112	857	14	469		
08-37.5722-102.5578-2-08-			0-C31047			49462	232	70	-4	48	12312	12	236	100	806	13	1047		
08-37.5864-102.5783-2-08-			0-C31048			49414	168	70	-4	48	9229	12	187	85	465	11	265		
08-37.5528-102.5094-2-08-			0-C31050			56531	229	66	-4	332	21585	12	205	137	729	13	155		
08-37.5533-102.5453-2-08-			0-C31051			50348	240	70	-4	46	13134	25	176	117	520	12	363		
08-37.5311-102.5358-2-08-			0-C31052			93289	261	61	-4	69	15315	12	130	118	390	16	229		
08-37.5189-102.6217-2-08-			0-C31053			73222	213	55	-4	49	38945	12	160	162	757	18	6254		
08-37.5467-102.6167-2-08-			0-C31054			48017	222	74	-4	85	7361	11	182	144	440	6	408		
08-37.5236-102.5642-2-08-			0-C31055			108000	274	69	-4	66	29385	12	134	195	724	14	352		
08-37.5128-102.5636-2-08-			0-C31056			44543	217	50	-4	996	31886	58	185	136	722	10	3034		
08-37.5136-102.5381-2-08-			0-C31057			71483	228	36	-4	60	45664	14	189	152	854	15	474		

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

①

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																				U CONCENTRATION																																																																																																																																																																																																																																																																																																																															
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SCINTILLOMETER (eU, ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DINC (H)	UNITS IN PPB																																																																																																																																																																																																																																																																																																																						
08-37.5311-102.5108-2-06	08-37.5239-102.6381-2-08	08-37.5203-102.6603-2-08	08-37.5394-102.6664-2-08	08-37.5450-102.6556-2-08	08-37.5431-102.6333-2-08	08-37.5572-102.6922-2-08	08-37.5581-102.7225-2-08	08-37.5428-102.7306-2-08	08-37.5281-102.7400-2-08	08-37.5094-102.7147-2-08	08-37.5781-102.7111-2-08	08-37.5728-102.7450-2-08	08-37.5550-102.7992-2-08	08-37.5864-102.7914-2-08	08-37.5294-102.8100-2-08	08-37.5278-102.7661-2-08	08-37.5747-102.8617-2-08	08-37.5133-102.8450-2-08	08-37.5372-102.8306-2-08	08-37.6225-102.8717-2-08	08-37.5706-102.8772-2-08	08-37.5919-102.9000-2-06	08-37.5883-102.9586-2-08	08-37.6192-102.9842-2-08	08-37.5839-102.9992-2-08	08-37.5581-102.8911-2-06	08-37.5689-102.9631-2-08	08-37.5431-102.9600-2-08	08-37.5397-102.9019-2-08	08-37.5419-102.8817-2-08	08-37.5372-102.9111-2-08	08-37.5269-102.9147-2-06	08-37.4958-102.9342-2-06	08-37.4556-102.8908-2-08	08-37.4119-102.9011-2-08	08-37.3931-102.9275-2-08	08-37.4122-102.9369-2-08	08-37.4086-102.9781-2-08	08-37.4569-102.9961-2-08	08-37.4553-102.9592-2-08	08-37.6017-102.0744-2-08	08-37.6161-102.1633-2-08	08-37.5714-102.1825-2-08	08-37.5664-102.0742-2-06	08-37.5481-102.2011-2-08	08-37.5183-102.2392-2-08	08-37.3381-102.4439-2-08	08-37.3158-102.4617-2-08	08-37.3464-102.4753-2-08	08-37.3592-102.5014-2-08	0-C31058-08/22/77-10	0-C31059-08/22/77-11	0-C31060-08/22/77-11	0-C31061-08/22/77-14	0-C31062-08/22/77-14	0-C31063-08/22/77-14	0-C31064-08/22/77-15	0-C31066-08/22/77-17	0-C31068-08/22/77-17	0-C31069-08/22/77-15	0-C31070-08/22/77-18	0-C31073-08/23/77-10	0-C31074-08/23/77-12	0-C31075-08/23/77-15	0-C31076-08/23/77-15	0-C31078-08/23/77-16	0-C31079-08/23/77-17	0-C31081-08/23/77-18	0-C31083-08/24/77-9	0-C31084-08/24/77-10	0-C31085-08/24/77-12	0-C31087-08/24/77-12	0-C31088-08/24/77-15	0-C31090-08/24/77-18	0-C31091-08/24/77-16	0-C31092-08/24/77-16	0-C31095-08/25/77-9	0-C31096-08/25/77-10	0-C31097-08/25/77-10	0-C31098-08/25/77-10	0-C31099-08/25/77-10	0-C31102-08/25/77-11	0-C31103-08/25/77-12	0-C31104-08/25/77-15	0-C31105-08/25/77-16	0-C31106-08/25/77-16	0-C31107-08/25/77-17	0-C31108-08/25/77-17	0-C31109-08/25/77-17	0-C31110-08/25/77-17	0-C31111-08/25/77-18	0-C31112-10/04/77-12	0-C31113-10/04/77-13	0-C31114-10/04/77-14	0-C31116-10/04/77-15	0-C31118-10/04/77-16	0-C31120-10/04/77-17	0-C31122-10/05/77-8	0-C31123-10/05/77-9	0-C31124-10/05/77-9	0-C31125-10/05/77-10	29-25.0-C	29-19.0-C	30-21.0-C	32-24.5-C	-21.0-C	29-16.0-C	33-16.0-C	33-24.0-C	30-21.0-C	30-22.0-C	31-24.0-C	20-22.0-C	27-16.0-C	32-16.5-C	32-16.0-C	33-22.0-C	30-22.0-C	27-24.0-C	25-15.0-C	-17.0-C	31-24.0-C	31-21.0-C	29-21.0-C	29-15.5-C	27-17.0-C	30-22.0-C	31-22.0-C	30-16.0-C	30-15.0-C	31-17.0-C	31-19.0-C	32-31.0-C	33-33.0-C	17-34.0-C	-21.0-C	33-21.0-C	33-23.0-C	33-17.5-C	32-13.0-C	34-17.0-C	29-17.5-C	29-21.0-C	28-19.0-C	32-19.0-C	31-16.0-C	32-16.0-C	12-14.0-C	12-13.0-C	14-14.0-C	14-17.0-C	-7.8-	-7.2-	-7.2-	-6.7-	-7.1-	-6.8-	-6.9-	-7.3-	-7.4-	-6.7-	-6.7-	-7.0-	-6.8-	-6.8-	-7.0-	-6.4-	-7.0-	-6.7-	-6.6-	-6.4-	-6.7-	-6.3-	-6.9-	-5.5-	-5.3-	-6.3-	-7.2-	-6.0-	-5.0-	-5.7-	-9.2-	-6.4-	-6.6-	-7.3-	-6.7-	-7.2-	-7.0-	-6.4-	-7.2-	-7.1-	-6.8-	720-	1520-	720-	750-	510-	475-	440-	650-	510-	700-	900-	550-	600-	1900-	525-	750-	575-	5010-	1290-	3100-	1000-	2250-	1925-	625-	900-	500-	165-	675-	3500-	2700-	1600-	2500-	11000-	1050-	900-	380-	450-	360-	360-	700-	700-	525-	850-	1000-	575-	3475-	800-	395-	575-	385-	900-	13-1-1-6-6-2-3-3-1-6-5-3-2-	11-1-1-1-1-1-1-4-3-1-2-1-3-6-	9-1-1-1-1-1-1-4-3-2-2-1-3-6-200-	15-1-1-1-1-1-1-4-3-2-1-1-3-6-	12-1-1-1-1-1-1-4-3-2-1-1-3-5-180-	9-1-1-1-1-1-1-4-3-2-1-1-3-6-80-	10-1-1-1-1-1-1-1-3-6-	14-1-1-1-1-1-1-4-3-2-2-1-3-6-	12-1-1-1-1-1-1-4-3-2-1-1-3-146-140-	9-1-1-1-1-1-1-4-3-1-1-1-3-6-	16-1-1-1-1-1-1-4-3-2-1-1-3-6-150-	13-1-1-1-1-1-1-4-3-1-3-1-3-6-	12-1-1-1-1-1-1-4-3-1-1-1-4-6-	18-1-1-1-1-1-1-4-3-1-1-1-3-6-	17-1-1-1-1-1-1-4-3-1-1-1-3-6-	17-1-1-1-1-1-1-4-3-1-1-1-3-6-319-170-	13-1-1-1-1-1-1-4-3-1-1-1-3-6-300-100-	11-1-1-1-1-1-1-4-3-2-2-1-3-6-140-	14-1-1-1-1-1-1-4-3-2-1-1-1-6-	13-1-1-1-1-1-1-4-3-2-1-1-1-6-	14-1-1-1-1-1-1-4-3-2-1-1-3-6-60-	14-1-1-1-1-1-1-4-3-2-1-1-3-6-	9-1-7-6-7-2-3-1-4-3-3-2-3-6-	16-1-1-1-1-1-1-4-3-2-2-1-3-6-	19-1-1-1-1-1-1-4-3-2-2-1-1-6-	10-1-1-1-1-1-1-4-3-2-2-1-1-6-	14-1-1-1-6-6-2-1-2-4-3-2-1-3-6-	14-1-1-1-1-1-1-4-3-2-1-1-1-6-	17-1-1-1-1-1-1-4-3-2-1-1-1-6-	13-1-1-1-1-1-1-4-3-2-1-1-1-6-	17-1-1-1-1-1-1-4-3-2-1-1-1-6-	20-1-1-1-1-1-1-4-3-2-1-1-3-6-50-38-	11-1-1-5-6-1-2-4-3-2-1-3-6-	9-1-1-6-7-2-3-4-3-2-1-3-6-	11-1-1-1-1-1-1-4-3-2-1-1-3-6-280-	20-1-1-1-1-1-1-4-3-1-1-1-1-6-	11-1-1-1-1-1-1-4-3-2-1-1-1-6-	13-1-1-1-1-1-1-4-3-2-2-1-3-6-	17-1-1-1-1-1-1-4-3-2-2-1-1-6-	12-1-1-1-1-1-1-4-3-2-2-1-1-6-	13-1-1-1-1-1-1-4-3-2-2-1-3-6-270-260-	18-1-1-1-1-1-1-4-3-1-1-1-3-6-	17-1-1-1-1-1-1-2-2-1-1-3-3-6-135-	11-1-1-1-1-1-1-7-2-1-1-1-3-6-	-1-1-1-1-1-1-4-3-1-1-1-3-6-	15-1-1-1-1-1-1-4-3-2-1-1-3-6-	17-1-1-1-1-1-1-4-3-1-1-1-1-6-	10-1-1-1-1-1-1-4-3-1-4-1-1-6-	19-1-1-1-1-1-1-4-3-2-4-1-1-6-	19-1-1-1-1-1-1-4-3-1-4-1-1-6-	23-1-1-1-1-1-1-7-2-2-4-1-6-8-	10.44	25.50*	0.16	0.01	6.00	2.81	6.79	2.17	6.78	0.67	0.64	10.16	2.15	3.04	6.29	1.46	0.81	14.02	17.41	117.00*	10.33	0.67	12.00	0.03	2.00	2.50	0.20	0.18	0.74	0.20	0.20*	0.35	197.20*	2.58	0.91	3.48	4.09	4.55	3.28	2.94	0.70	2.08	9.55	12.19	3.09	12.19	1.18	3.14	2.17	2.75	4.71

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY												
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)											
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn
08-37.5311-102.5108-2-06-			0-C31058			71827	230	62	-4	60	33411	37	205	203	777	13	304	
08-37.5239-102.6381-2-08-			0-C31059			150000	250	43	-4	92	60747	35	80	180	821	24	333	
08-37.5203-102.6603-2-08-			0-C31060			60081	211	77	-4	83	22815	89	164	171	627	17	1083	
08-37.5394-102.6664-2-08-			0-C31061			42284	220	75	-4	178	21704	79	161	188	760	14	966	
08-37.5450-102.6556-2-08-			0-C31062			80999	224	100	-4	931	13058	27	174	228	702	42	161	
08-37.5431-102.6333-2-08-			0-C31063			72137	224	93	-4	63	7494	10	173	207	563	16	149	
08-37.5572-102.6922-2-08-			0-C31064			58561	195	84	-4	87	11892	41	161	175	610	18	326	
08-37.5581-102.7225-2-08-			0-C31066			87118	226	88	-4	93	19424	21	160	187	702	18	696	
08-37.5428-102.7306-2-08-			0-C31068			53407	224	87	-4	49	16758	10	218	182	776	22	507	
08-37.5281-102.7400-2-08-			0-C31069			40259	213	74	-4	71	17666	28	186	181	655	17	320	
08-37.5094-102.7147-2-08-			0-C31070			51163	203	88	-4	195	26593	72	183	189	766	17	287	
08-37.5781-102.7111-2-08-			0-C31073			52555	209	98	-4	53	18209	13	238	216	828	18	491	
08-37.5728-102.7450-2-08-			0-C31074			41575	206	83	-4	2753	21048	84	202	252	722	15	2452	
08-37.5550-102.7992-2-08-			0-C31075			239000	333	103	-4	116	69404	16	196	431	2027	43	403	
08-37.5864-102.7914-2-08-			0-C31076			69072	219	80	-4	66	14256	46	162	169	416	13	268	
08-37.5294-102.8100-2-08-			0-C31078			79099	258	70	-4	1182	36013	130	177	172	851	15	306	
08-37.5278-102.7661-2-08-			0-C31079			45998	201	92	-4	356	21587	232	189	182	740	15	1468	
08-37.5747-102.8617-2-08-			0-C31081			543000	641	-25	-4	305	437000	298	-25	495	4662	65	574	
08-37.5133-102.8450-2-08-			0-C31083			120000	285	150	-4	131	44811	22	272	487	1749	46	528	
08-37.5372-102.8306-2-08-			0-C31084			393000	458	160	-4	2792	141000	118	-25	731	2490	76	463	
08-37.6225-102.8717-2-08-			0-C31085			140000	293	97	-4	121	41283	15	159	315	1111	27	184	
08-37.5706-102.8772-2-08-			0-C31087			262000	360	43	-4	47102	146000	849	-25	525	1538	42	235	
08-37.5919-102.9000-2-06-			0-C31088			298000	382	83	-4	335	72051	65	-25	384	985	39	251	
08-37.5983-102.9586-2-08-			0-C31090			63655	234	90	-4	7968	36217	334	202	332	964	25	409	
08-37.6192-102.9842-2-08-			0-C31091			106000	268	94	-4	12232	53561	276	190	384	1167	29	310	
08-37.5839-102.9992-2-08-			0-C31092			94132	231	120	-4	104	13613	25	184	339	809	29	121	
08-37.5581-102.8911-2-06-			0-C31095			33958	195	128	-4	123	1836	39	205	272	629	21	99	
08-37.5689-102.9631-2-08-			0-C31096			127000	309	57	-4	118000	98528	2636	217	812	1487	32	236	
08-37.5431-102.9600-2-08-			0-C31097			352000	477	-25	-4	85552	207000	2997	-25	792	1272	42	643	
08-37.5397-102.9019-2-08-			0-C31098			283000	434	-25	-4	51294	186000	1478	-25	549	1366	55	377	
08-37.5419-102.8817-2-08-			0-C31099			179000	353	90	-4	41385	111000	1208	144	729	1646	44	243	
08-37.5372-102.9111-2-08-			0-C31102			350000	417	84	-4	31924	165000	843	-25	785	1158	63	596	
08-37.5269-102.9147-2-06-			0-C31103			559000	876	-25	-4	533	891000	66	-25	371	14286	66	636	
08-37.4958-102.9342-2-06-			0-C31104			220000	265	82	-4	79	58035	15	-25	319	-200	27	178	
08-37.4556-102.8908-2-08-			0-C31105			136000	262	70	-4	1272	66049	155	81	372	573	29	356	
08-37.4119-102.9011-2-08-			0-C31106			59231	221	114	-4	1189	20889	75	171	385	706	22	179	
08-37.3931-102.9275-2-08-			0-C31107			91600	254	121	-4	73	12371	23	123	378	286	22	264	
08-37.4122-102.9369-2-08-			0-C31108			50781	228	113	-4	53	18508	13	184	352	600	18	480	
08-37.4086-102.9781-2-08-			0-C31109			59203	208	118	-4	78	17032	11	204	311	672	17	231	
08-37.4569-102.9961-2-08-			0-C31110			129000	243	93	-4	84	36109	11	66	339	455	23	454	
08-37.4553-102.9592-2-08-			0-C31111			90779	239	87	-4	530	50033	44	136	365	711	21	371	
08-37.6017-102.0744-2-08-			0-C31112			52787	-55	-25	-4	67	18394	42	-25	-25	-200	-4	1079	
08-37.6161-102.1633-2-08-			0-C31113			90457	69	-25	-4	51	29992	4	-25	-25	-200	-4	885	
08-37.5714-102.1825-2-08-			0-C31114			76511	62	-25	-4	40	38629	4	-25	-25	-200	-4	256	
08-37.5664-102.0742-2-08-			0-C31116			53763	-55	-25	-4	34	23330	-3	-25	-25	-200	-4	371	
08-37.5481-102.2011-2-08-			0-C31118			610000	309	69	-4	129	100000	90	-25	323	-200	64	642	
08-37.5183-102.2392-2-08-			0-C31120			55204	-55	-25	-4	2213	38771	195	-25	-25	-200	-4	-50	
08-37.3381-102.4439-2-08-			0-C31122			55835	-55	-25	-4	96	12094	-3	-25	-25	-200	7	-50	
08-37.3158-102.4617-2-08-			0-C31123			63161	-55	-25	-4	47	27319	-3	-25	-25	-200	-4	-50	
08-37.3464-102.4753-2-08-			0-C31124			57639	68	-25	-4	107	11348	8	26	55	266	19	223	
08-37.3592-102.5014-2-08-			0-C31125			105000	91	-25	-4	90	40762	6	-25	-25	-200	13	60	

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REMARKS	LAL SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.2933-102.4494-2-08-						0-C31128	110000	96	-25	-4	111	22026	8	-25	-25	-200	20	108	
08-37.2861-102.4717-2-08-						0-C31129	83209	57	-25	-4	215	16984	67	-25	-25	-200	7	304	
08-37.2636-102.4403-2-08-						0-C31130	73375	65	-25	-4	78	33472	6	-25	-25	-200	14	286	
08-37.2661-102.3925-2-08-						0-C31131	52589	60	-25	-4	70	26928	4	48	91	580	29	131	
08-37.3267-102.3706-2-08-						0-C31132	56391	70	28	-4	56	19753	6	55	135	528	27	182	
08-37.3431-102.4086-2-08-						0-C31133	70769	75	-25	-4	88	17632	9	-25	82	296	20	113	
08-37.5425-102.3739-2-08-						0-C31134	62912	67	52	-4	105	19242	11	-25	146	418	23	132	
08-37.5142-102.3642-2-08-						0-C31135	109000	81	37	-4	78	31500	8	-25	170	451	29	131	
08-37.5069-102.3275-2-08-						0-C31136	138000	158	-25	-4	413	112000	101	-25	109	883	34	90	
08-37.5253-102.3306-2-08-						0-C31137	79306	99	46	-4	89	21878	6	-25	104	318	24	1241	
08-37.5292-102.2878-2-08-						0-C31140	58398	106	-25	-4	4938	31643	233	34	126	564	21	1264	
08-37.5092-102.2625-2-08-						0-C31141	200000	183	-25	-4	1174	112000	85	-25	121	904	33	898	
08-37.6144-102.2661-2-08-						0-C31143	87529	93	-25	-4	68	30584	23	-25	62	206	23	1798	
08-37.5933-102.3097-2-08-						0-C31144	68529	68	-25	-4	77	17820	10	-25	-25	225	17	205	
08-37.5711-102.2983-2-08-						0-C31145	104000	98	-25	-4	138	37800	7	-25	-25	237	19	219	
08-37.5711-102.3467-2-08-						0-C31146	120000	138	-25	-4	69	30007	11	-25	-25	-200	20	268	
08-37.6583-102.2831-2-08-						0-C31148	86698	82	-25	-4	251	26859	22	-25	-25	-200	7	104	
08-37.6511-102.3664-2-08-						0-C31149	78610	98	-25	-4	117	23380	6	-25	-25	-200	11	152	
08-37.6881-102.3547-2-08-						0-C31150	86593	109	-25	-4	96	17411	11	-25	-25	-200	11	569	
08-37.7056-102.3317-2-08-						0-C31151	228000	201	30	-4	138	42188	9	-25	145	383	43	207	
08-37.6953-102.2922-2-08-						0-C31152	75342	89	-25	-4	138	20079	6	-25	-25	-200	5	150	
08-37.6897-102.2547-2-08-						0-C31153	72550	95	-25	-4	77	17661	6	-25	-25	-200	11	386	
08-37.6728-102.3083-2-08-						0-C31154	77710	101	-25	-4	84	21198	49	-25	-25	-200	7	205	
08-37.0925-102.1453-2-08-						0-C31155	49243	73	-25	-4	122	34813	9	-25	-25	-200	8	154	
20-37.0519-102.0081-2-08-						0-C31157	92141	124	-25	-4	206	38663	13	-25	-25	-200	-4	153	
20-37.0225-102.0353-2-08-						0-C31158	121000	128	-25	-4	104	53179	25	-25	-25	-200	-4	258	
08-37.0047-102.1028-2-08-						0-C31160	90575	118	-25	-4	214	37761	10	-25	-25	-200	-4	294	
08-37.0003-102.1442-2-08-						0-C31161	78980	113	-25	-4	222	27615	11	-25	-25	-200	-4	160	
08-37.0058-102.1703-2-08-						0-C31162	71479	99	-25	-4	143	38655	9	-25	-25	-200	-4	175	
08-37.0483-102.1447-2-08-						0-C31163	128000	132	-25	-4	125	46193	8	-25	-25	-200	5	192	
08-37.0414-102.0822-2-08-						0-C31164	98122	112	-25	-4	100	41545	11	-25	-25	-200	11	184	
08-37.0556-102.0767-2-08-						0-C31165	76031	95	-25	-4	63	36148	5	-25	-25	-200	-4	138	
08-37.6333-102.1283-2-08-						0-C31166	76463	99	-25	-4	58	21441	7	-25	-25	-200	15	360	
08-37.6525-102.1256-2-08-						0-C31167	43429	125	216	-4	68	16478	33	183	255	588	54	390	
08-37.6756-102.1281-2-08-						0-C31168	98314	124	-25	-4	54	20301	10	-25	-25	-200	11	164	
08-37.6850-102.1281-2-07-						0-C31169	79369	93	-25	-4	1473	11253	245	-25	-25	-200	35	127	
08-37.6869-102.1692-2-08-						0-C31170	122000	117	-25	-4	55	25753	7	-25	-25	-200	5	340	
08-37.6883-102.2075-2-08-						0-C31171	83789	100	-25	-4	53	15465	9	-25	-25	-200	5	210	
08-37.6875-102.2469-2-08-						0-C31172	76560	88	-25	-4	67	17620	19	-25	-25	-200	-4	397	
08-37.7306-102.1853-2-08-						0-C31173	128000	119	-25	-4	87	29238	9	-25	-25	-200	-4	474	
08-37.7375-102.1286-2-08-						0-C31174	91630	114	-25	-4	37	22787	9	-25	-25	-200	-4	743	
08-37.7158-102.1286-2-08-						0-C31175	95803	128	-25	-4	39	24713	16	-25	-25	-200	-4	443	
08-37.7011-102.1289-2-08-						0-C31176	76716	93	-25	-4	394	18160	19	-25	-25	-200	-4	476	
08-37.6964-102.1906-2-08-						0-C31177	98598	127	-25	-4	107	32564	33	-25	-25	-200	-4	691	
08-37.7164-102.1942-2-08-						0-C31178	94510	114	-25	-4	35	21229	13	-25	-25	-200	-4	559	
08-37.6350-102.1992-2-08-						0-C31180	73397	112	-25	-4	90	19947	11	-25	-25	-200	-4	745	
08-37.7308-102.2550-2-08-						0-C31181	156000	150	-25	-4	68	31860	8	-25	-25	-200	-4	345	
08-37.7467-102.2603-2-08-						0-C31182	103000	88	-25	-4	47	16205	-3	-25	-25	-200	-4	212	
08-37.7156-102.2936-2-08-						0-C31183	110000	79	-25	-4	44	14518	5	-25	-25	-200	-4	376	
08-37.7172-102.3147-2-08-						0-C31184	62301	62	-25	-4	70	16775	4	-25	-25	-200	-4	91	
08-37.7242-102.3661-2-08-						0-C31185	103000	108	-25	-4	40	32751	-3	-25	-25	-200	-4	66	

[illegible]

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.7317-102.3331-2-08-			0-C31186			7092R		78	-25	-4	54	19918	5	-25	-25	-200	-4	217	
08-37.9897-102.9233-2-08-			0-C31187			4440		-55	-25	-4	284	4010	26	-25	-25	-200	-4	204	
08-37.9614-102.9222-2-08-			0-C31188			117000		108	-25	-4	13032	35062	284	120	104	1366	31	3835	
08-37.9375-102.9056-2-08-			0-C31189			109000		113	-25	-4	12404	91836	535	116	126	1557	31	385	
08-37.9694-102.9958-2-08-			0-C31195			165000		92	-25	-4	103	78174	55	141	114	1868	33	237	
08-37.9519-102.9756-2-08-			0-C31196			296000		227	-25	-4	327	111000	60	94	322	2348	61	3542	
08-37.9094-102.9933-2-08-			0-C31197			118000		78	63	-4	43	21375	17	130	223	1185	33	3309	
08-37.9011-102.9878-2-08-			0-C31198			162000		133	-25	-4	196	85834	189	131	177	1785	36	499	
08-37.9644-102.8786-2-07-			0-C31203			212000		149	76	-4	71	92781	22	81	435	1774	58	273	
08-37.9431-102.7983-2-08-			0-C31204			26218		-55	52	-4	150	21302	116	71	254	881	30	285	
08-37.9186-102.8000-2-08-			0-C31206			201000		223	-25	-4	20576	152000	381	220	353	3184	42	293	
08-37.9272-102.7656-2-08-			0-C31207			64375		-55	-25	-4	1409	49716	182	45	107	757	15	210	
08-37.9694-102.7792-2-08-			0-C31209			100000		66	-25	-4	6145	54249	129	53	175	840	17	166	
08-37.9828-102.7778-2-08-			0-C31210			87621		-55	81	-4	610	22027	52	98	344	869	35	72	
08-37.8361-102.9219-2-06-			0-C31211			26608		-55	59	-4	73	12979	11	96	218	649	20	62	
08-37.8386-102.8925-2-06-			0-C31212			34094		-55	-25	-4	136	6301	60	-25	29	-200	-4	-50	
08-37.8078-102.9514-2-06-			0-C31214			42273		-55	-25	-4	544	5352	362	-25	46	-200	5	93	
08-37.8497-102.9772-2-08-			0-C31215			142000		331	-25	-4	908	272000	1140	-25	494	1724	16	18913	
08-37.8397-102.9472-2-06-			0-C31216			74307		-55	-25	-4	68	6047	11	-25	77	-200	9	114	
08-37.7936-102.9733-2-08-			0-C31217			91203		127	-25	-4	45	82927	33	36	100	853	24	134	
08-37.7847-102.9367-2-06-			0-C31218			118000		85	53	-4	1169	24553	194	-25	107	290	23	75	
08-37.7783-102.9478-2-08-			0-C31220			149000		211	-25	-4	40175	139000	699	48	304	1518	38	361	
08-37.7764-102.8756-2-08-			0-C31223			55993		70	-25	-4	10363	36897	275	-25	90	380	13	243	
08-37.8242-102.7361-2-08-			0-C31225			77583		94	-25	-4	9237	61061	261	-25	93	463	7	161	
08-37.8097-102.7189-2-08-			0-C31227			77244		105	-25	-4	8172	45120	220	-25	209	379	16	642	
08-37.7928-102.6992-2-08-			0-C31229			38955		88	83	-4	796	17188	71	103	237	649	18	72	
08-37.8017-102.6381-2-08-			0-C31230			128000		141	41	-4	197	35871	13	-25	269	-200	22	162	
08-37.7783-102.6364-2-08-			0-C31231			81752		89	79	-4	38	25505	-3	65	314	632	31	150	
08-37.7756-102.6742-2-07-			0-C31233			104000		112	81	-4	59	27784	14	93	196	717	22	156	
08-37.7719-102.7256-2-08-			0-C31234			65676		97	37	-4	1104	32664	20	38	153	468	14	229	
08-37.8383-102.6758-2-07-			0-C31235			90771		157	33	-4	57	55382	63	103	134	744	12	242	
08-37.8619-102.6536-2-08-			0-C31237			130000		168	26	-4	1209	53405	76	-25	143	384	16	185	
08-37.8522-102.7222-2-08-			0-C31238			14353		66	41	-4	4647	11340	61	-25	79	-200	-4	153	
08-37.8272-102.7414-2-08-			0-C31239			5408		67	-25	-4	417	3297	10	-25	-25	-200	-4	252	
08-37.7664-102.7708-2-08-			0-C31240			104000		150	43	-4	2178	61857	176	57	198	775	24	811	
08-37.7636-102.8036-2-08-			0-C31241			92588		152	45	-4	2744	65918	160	162	152	1459	26	795	
08-37.7947-102.8083-2-08-			0-C31242			61900		127	51	-4	4116	41425	116	109	172	936	19	562	
08-37.8047-102.8369-2-06-			0-C31243			54267		94	78	-4	237	7273	21	62	120	372	16	137	
08-37.7961-102.8311-2-06-			0-C31245			281000		278	76	-4	83	67207	22	-25	320	1000	42	311	
08-37.8817-102.8222-2-08-			0-C31246			85471		85	-25	-4	3353	56466	185	-25	61	284	15	168	
08-37.8408-102.8053-2-08-			0-C31248			160000		117	-25	-4	124	32616	8	-25	99	-200	24	280	
08-37.8361-102.8317-2-06-			0-C31249			187000		162	-25	-4	69	73093	243	-25	171	427	34	160	
08-37.8131-102.8472-2-08-			0-C31250			95293		88	-25	-4	14062	54432	396	-25	161	612	24	211	
08-37.7817-102.8500-2-08-			0-C31251			232000		208	-25	-4	1930	176000	471	-25	255	1371	45	2417	
08-37.7961-102.8600-2-08-			0-C31255			282000		194	-25	-4	7819	122000	1431	-25	252	748	47	202	
08-37.8167-102.8728-2-06-			0-C31256			111000		79	100	-4	93	19822	24	59	225	668	34	134	
08-37.8256-102.8750-2-06-			0-C31257			50755		-55	77	-4	104	5735	204	62	232	407	32	108	
08-37.8164-102.8733-2-06-			0-C31258			118000		81	-25	-4	199	29517	563	-25	147	-200	24	173	
08-37.9658-102.6864-2-08-			0-C31262			297000		289	-25	-4	20885	298000	1353	-25	269	2125	46	355	
08-37.9394-102.6847-2-08-			0-C31263			100000		98	-25	-4	1357	68526	126	-25	132	-200	30	788	
08-37.9453-102.7142-2-08-			0-C31264			6908		-55	71	-4	31	557	-3	56	97	334	19	57	

DOE SAMPLE NUMBER					LASL SAMPLE LOCATION NUMBER AND FIELD DATA																				U CONCENTRATION										
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SCINTILLOMETER (eU ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	REFL	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (N)	UNITS IN PPB
							DATE	HOUR																											
08-37.9875-102.6747-2-08-	0-C31265-07/25/77-12-	29-16.0-C-	6.7-	1525-	-1-6-4-6-	-1-	-4-3-1-3-	-1-1-	-	-	-	1.25																							
08-37.9953-102.6519-2-08-	0-C31266-07/25/77-12-	28-17.0-	6.6-	1500-	-1-6-4-6-	-1-	-4-3-1-3-	-1-1-	6-	-	-	0.38																							
08-37.9906-102.7242-2-08-	0-C31270-07/25/77-14-	30-19.0-C-	7.1-	1700-	-1-6-4-6-	-1-	-4-3-1-3-	-1-3-	-	-	-	1.25																							
08-37.9756-102.7228-2-08-	0-C31271-07/25/77-14-	28-21.0-C-	6.6-	2400-	-1-6-4-6-	-1-	-4-3-1-3-	-1-3-	-	-	-	0.63																							
08-37.9394-102.6711-2-08-	0-C31272-07/25/77-15-	29-17.0-C-	7.0-	1300-	-1-6-4-6-	-1-	-4-3-1-3-	-1-3-	-	-	-	1.15																							
08-37.9233-102.6575-2-08-	0-C31273-07/25/77-15-	30-16.0-C-	7.0-	1300-	-1-6-4-6-	-1-	-4-3-1-3-	-1-3-	-	-	-	0.14																							
08-37.8869-102.6917-2-08-	0-C31275-07/25/77-17-	28-19.0-C-	6.6-	1400-	-1-6-4-6-	-1-	-4-3-1-3-	-1-3-	-	-	-	0.36																							
08-37.9328-102.6417-2-08-	0-C31276-07/25/77-17-	27-16.0-C-	7.0-	2650-	-1-6-4-6-	-1-	-4-3-1-3-	-1-3-	-	-	-	0.09																							
08-37.9872-102.6178-2-08-	0-C31277-07/26/77-10-	24-22.0-C-	6.5-	1600-	-1-6-4-6-	-1-	-4-3-1-3-	-1-3-	6-	-	-	0.51																							
08-37.9239-102.6097-2-08-	0-C31278-07/26/77-12-	24-20.0-C-	7.3-	1400-	-1-1-4-1-	-	-4-3-1-3-	-1-3-	6-298-119-	-	-	0.16																							
08-37.8872-102.6203-2-08-	0-C31279-07/26/77-12-	24-24.0-C-	7.8-	725-	-1-6-4-6-	-1-	-4-3-1-3-	-1-2-	-	-	-	0.34																							
08-37.9078-102.6128-2-08-	0-C31280-07/26/77-13-	25-23.0-C-	6.8-	1300-	-1-6-4-6-	-1-	-4-3-1-3-	-1-3-	-	-	-	0.23																							
08-37.9731-102.5928-2-08-	0-C31281-07/26/77-9-	20-16.0-C-	7.2-	900-	-1-1-	-	-4-3-2-3-	-1-1-	6-	-	-	2.83																							
08-37.9964-102.5803-2-08-	0-C31282-07/26/77-9-	-16.0-C-	7.1-	610-	-1-1-	-	-4-3-2-3-	-1-1-	6-	-	-	1.96																							
08-37.9658-102.5669-2-08-	0-C31283-07/26/77-9-	23-17.0-C-	6.8-	1650-	-1-1-	-	-4-2-3-	-1-1-	6-	-	-	0.44																							
08-37.9789-102.5328-2-08-	0-C31284-07/26/77-10-	23-18.5-C-	7.2-	-	-1-2-	-	-4-3-2-3-	-1-1-	6-	-	-	4.57																							
08-37.3369-102.8356-2-08-	0-C31285-09/08/77-14-	34-21.0-C-	6.8-	340-	13-1-1-	-	-4-3-1-1-	-1-3-	6-	-	-	2.34																							
08-37.3636-102.8211-2-08-	0-C31286-09/08/77-12-	35-19.0-C-	6.5-	145-	12-1-1-	-	-4-3-3-2-	-1-1-	6-	-	-	0.45																							
08-37.3083-102.7869-2-08-	0-C31287-09/08/77-14-	35-17.0-C-	6.6-	290-	7-1-1-	-	-4-3-2-2-	-1-1-	6-	-	-	2.71																							
08-37.2906-102.8144-2-08-	0-C31290-09/08/77-15-	35-17.0-C-	6.3-	440-	15-1-1-	-	-4-3-3-2-	-1-1-	6-	-	-	1.62																							
08-37.2797-102.8856-2-08-	0-C31291-09/08/77-16-	35-18.0-C-	6.8-	390-	8-1-1-	-	-4-3-2-2-	-1-1-	6-	-	-	4.14																							
08-37.2786-102.9081-2-08-	0-C31292-09/08/77-16-	35-16.5-C-	6.7-	415-	7-1-1-	-	-4-3-1-2-	-1-3-	6-	-	-	7.26																							
08-37.2700-102.9314-2-08-	0-C31293-09/08/77-16-	35-17.0-C-	7.0-	475-	10-1-1-	-	-4-3-1-2-	-1-1-	6-	-	-	4.72																							
08-37.2772-102.9650-2-08-	0-C31294-09/08/77-16-	35-16.0-C-	7.1-	590-	11-1-1-	-	-4-3-3-2-	-1-3-	6-200-	-	-	6.70																							
08-37.3075-102.9853-2-08-	0-C31296-09/08/77-17-	32-15.0-C-	6.8-	580-	12-1-1-	-	-4-3-2-2-	-1-1-	6-	-	-	0.95																							
08-37.3136-102.9072-2-08-	0-C31297-09/08/77-17-	32-16.0-C-	6.6-	330-	12-1-1-	-	-4-3-1-2-	-1-1-	6-	-	-	7.26																							
08-37.3589-102.9044-2-08-	0-C31298-09/08/77-18-	29-15.0-C-	6.4-	400-	20-1-1-	-	-4-3-2-2-	-1-1-	6-	-	-	0.76																							
08-37.3525-102.9639-2-08-	0-C31302-09/08/77-19-	27-15.0-C-	6.8-	455-	12-1-1-	-	-4-3-2-2-	-1-1-	6-	-	-	4.33																							
08-37.3717-102.9308-2-08-	0-C31303-09/08/77-12-	24-23.0-C-	7.2-	340-	17-1-1-	-	-4-3-2-2-	-1-3-	6-	-	-	3.75																							
08-37.3522-102.9242-2-08-	0-C31304-09/09/77-12-	-	6.9-	-	15-1-1-	-	-4-3-2-2-	-1-3-	6-234-215-	-	-	9.08																							
08-37.3231-102.9372-2-08-	0-C31305-09/09/77-13-	22-16.5-C-	6.6-	365-	-	-	-4-3-2-2-	-1-3-	6-320-	-	-	25.80																							
08-37.1992-102.6244-2-08-	0-C31306-09/15/77-16-	21-20.5-C-	7.4-	375-	14-1-1-	-	-4-3-1-4-	-1-3-	6-	-	-	6.17																							
08-37.1772-102.5975-2-08-	0-C31307-09/15/77-17-	21-20.0-C-	7.0-	340-	7-1-1-	-	-4-3-2-2-	-1-3-	6-	-	-	1.92																							
08-37.1556-102.5792-2-08-	0-C31308-09/15/77-18-	22-19.0-C-	7.1-	550-	9-1-1-	-	-4-3-2-2-	-1-3-	6-430-	-	-	0.44																							
08-37.1533-102.6206-2-08-	0-C31309-09/16/77-11-	29-19.0-C-	7.2-	480-	13-1-1-	-	-4-3-2-2-	-1-3-	6-280-	-	-	4.70																							
08-37.1414-102.5781-2-08-	0-C31310-09/16/77-11-	29-17.5-C-	7.2-	420-	8-1-1-	-	-4-3-1-2-	-1-6-	8-	-	-	2.87																							
08-37.1481-102.5303-2-08-	0-C31311-09/16/77-12-	28-18.0-C-	7.3-	470-	11-1-1-	-	-4-3-1-2-	-1-3-	6-	-	-	7.83																							
08-37.1358-102.5200-2-08-	0-C31312-09/16/77-13-	29-17.0-C-	7.2-	370-	7-1-1-	-	-4-3-2-2-	-1-2-	6-260-	-	-	4.70																							
08-37.1650-102.5022-2-08-	0-C31313-09/16/77-13-	28-16.0-C-	7.2-	700-	9-1-1-	-	-4-3-1-3-	-1-1-	6-	-	-	0.44																							
08-37.1931-102.5192-2-08-	0-C31314-09/16/77-14-	28-18.0-C-	6.9-	600-	8-1-1-	-	-4-3-2-3-	-1-3-	6-165-125-	-	-	5.14																							
08-37.2064-102.5072-2-08-	0-C31315-09/16/77-14-	28-22.0-C-	7.1-	800-	5-1-1-	-	-4-3-1-2-	-1-3-	6-	-	-	12.78																							
08-37.2281-102.5069-2-08-	0-C31316-09/16/77-15-	28-19.0-C-	7.4-	300-	12-1-1-	-	-4-3-1-2-	-1-3-	6-	-	-	2.17																							
08-37.2069-102.5461-2-08-	0-C31317-09/16/77-16-	28-17.0-C-	7.0-	500-	10-1-1-	-	-4-3-1-2-	-1-3-	6-240-	-	-	0.13																							
08-37.2136-102.5597-2-08-	0-C31318-09/16/77-16-	28-21.5-C-	6.9-	340-	9-1-1-	-	-4-3-1-2-	-1-3-	6-	-	-	0.23																							
08-37.2197-102.5975-2-08-	0-C31319-09/16/77-17-	29-22.0-C-	7.0-	330-	8-1-1-	-	-4-3-1-2-	-1-3-	6-	-	-	0.01																							
08-37.2344-102.6156-2-08-	0-C31320-09/16/77-17-	23-19.0-C-	6.8-	320-	13-1-1-	-	-4-	-1-2-	-1-3-	6-	-	0.14																							
08-37.2406-102.5894-2-08-	0-C31321-09/16/77-18-	24-16.5-	6.8-	330-	8-1-1-	-	-	-2-	-1-4-	6-	-	8.81																							
08-37.2461-102.6547-2-08-	0-C31324-09/17/77-14-	30-16.0-C-	7.0-	285-	8-1-1-	-	-	-2-1-	-1-3-	6-	-	2.48																							
08-37.2211-102.7139-2-08-	0-C31326-09/17/77-18-	30-18.0-C-	7.0-	355-	10-1-1-	-	-	-3-2-1-	-1-3-	-	-	0.60																							
08-37.1931-102.7433-2-08-	0-C31329-09/17/77-16-	30-20.0-C-	7.0-	400-	12-1-1-	-	-	-4-3-2-1-	-1-3-	6-	-	4.75																							
08-37.1919-102.7158-2-08-	0-C31330-09/17/77-16-	28-18.0-C-	7.0-	700-	10-1-1-	-	-	-4-3-2-1-	-1-3-	6-350-	-	3.27																							

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY												
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)											
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn
08-37.9875-102.6747-2-08-						0-C31265	114000	91	-25	-4	10158	77515	217	-25	165	-200	40	210
08-37.9953-102.6519-2-08-						0-C31266	111000	84	59	-4	13503	77873	215	-25	180	-200	41	-50
08-37.9906-102.7242-2-08-						0-C31270	60195	-55	46	-4	3557	64558	114	68	184	-200	40	84
08-37.9756-102.7223-2-08-						0-C31271	113000	108	-25	-4	10082	112000	215	-25	230	-200	42	245
08-37.9394-102.6711-2-08-						0-C31272	102000	95	76	-4	1099	68018	97	33	280	-200	46	125
08-37.9233-102.6575-2-08-						0-C31273	92063	107	79	-4	15465	65540	281	62	301	-200	42	623
08-37.8869-102.6917-2-08-						0-C31275	77415	94	43	-4	5121	64171	170	61	205	-200	35	752
08-37.9328-102.6417-2-08-						0-C31276	97319	114	44	-4	16169	91753	896	63	248	-200	43	2677
08-37.9872-102.6178-2-08-						0-C31277	110000	129	91	-4	144	74470	15	45	316	-200	55	5155
08-37.9239-102.6097-2-08-						0-C31278	22281	-55	53	-4	70	15990	79	29	32	-200	16	129
08-37.8872-102.6203-2-08-						0-C31279	6393	-55	29	-4	32	3531	8	52	-25	-200	11	147
08-37.9078-102.6128-2-08-						0-C31280	82327	65	-25	-4	1094	55130	52	-25	46	-200	20	662
08-37.9731-102.5928-2-08-						0-C31281	87640	63	61	-4	42	33793	-3	35	62	-200	24	233
08-37.9964-102.5803-2-08-						0-C31282	64290	81	29	-4	46	23982	-3	39	27	-200	24	193
08-37.9658-102.5669-2-08-						0-C31283	107000	72	-25	-4	6512	74166	302	-25	68	-200	27	4417
08-37.9789-102.5328-2-08-						0-C31284	226000	205	-25	-4	3146	155000	63	-25	210	-200	59	367
08-37.3369-102.8356-2-08-						0-C31285	35218	-55	102	-4	74	6914	34	106	112	-200	27	524
08-37.3636-102.8211-2-08-						0-C31286	2793	-55	89	14	45	4782	40	104	112	522	24	1421
08-37.3083-102.7869-2-08-						0-C31287	31499	-55	45	-4	-25	9451	-3	55	55	-200	18	128
08-37.2906-102.8144-2-08-						0-C31290	32647	-55	56	-4	428	18939	12	80	92	-200	20	114
08-37.2797-102.8856-2-08-						0-C31291	30482	-55	50	-4	60	17162	4	68	71	-200	21	121
08-37.2786-102.9081-2-08-						0-C31292	35297	-55	53	-4	27	17122	-3	83	91	-200	23	992
08-37.2700-102.9314-2-08-						0-C31293	41507	-55	41	-4	-25	21880	-3	224	39	-200	19	-50
08-37.2772-102.9650-2-08-						0-C31294	48489	-55	32	-4	39	20238	4	35	-25	-200	18	769
08-37.3075-102.9853-2-08-						0-C31296	70505	-55	47	-4	61	17199	5	-25	31	-200	20	-50
08-37.3136-102.9072-2-08-						0-C31297	31003	-55	56	-4	739	14439	123	54	65	-200	21	-50
08-37.3589-102.9044-2-08-						0-C31298	31380	-55	31	-4	68	18656	7	39	-25	-200	10	-50
08-37.3525-102.9639-2-08-						0-C31302	50317	-55	33	-4	67	13373	-3	45	-25	-200	9	-50
08-37.3717-102.9308-2-08-						0-C31303	32588	-55	-25	-4	-25	14880	7	-25	43	-200	17	614
08-37.3522-102.9242-2-08-						0-C31304	38680	-55	-25	-4	-25	14145	5	-25	65	-200	18	223
08-37.3231-102.9372-2-08-						0-C31305	33123	-55	-25	-4	2139	18272	196	-25	80	-200	17	842
08-37.1992-102.6244-2-08-						0-C31306	29572	-55	-25	-4	55	16384	8	-25	51	-200	13	469
08-37.1772-102.5975-2-08-						0-C31307	32159	-55	-25	-4	74	15088	17	-25	72	-200	20	412
08-37.1556-102.5792-2-08-						0-C31308	30713	-55	-25	-4	67	22407	26	-25	115	-200	26	442
08-37.1533-102.6206-2-08-						0-C31309	42479	-55	-25	-4	29	19980	8	-25	47	-200	23	508
08-37.1414-102.5781-2-08-						0-C31310	34944	-55	-25	-4	33	21838	7	-25	97	-200	24	239
08-37.1481-102.5303-2-08-						0-C31311	39893	-55	-25	-4	35	26214	11	-25	69	-200	18	303
08-37.1358-102.5200-2-08-						0-C31312	32488	-55	-25	-4	44	17056	12	-25	75	-200	18	218
08-37.1650-102.5022-2-08-						0-C31313	26906	-55	-25	-4	69	19972	23	-25	72	-200	27	359
08-37.1931-102.5192-2-08-						0-C31314	39751	-55	-25	-4	-25	35339	9	-25	74	-200	19	381
08-37.2064-102.5072-2-08-						0-C31315	64918	66	-25	-4	39	51454	7	-25	94	-200	24	234
08-37.2281-102.5069-2-08-						0-C31316	31433	-55	-25	-4	-25	11374	30	-25	55	-200	18	213
08-37.2069-102.5461-2-08-						0-C31317	35962	-55	-25	-4	405	28348	101	-25	244	-200	21	245
08-37.2136-102.5597-2-08-						0-C31318	26438	-55	-25	-4	4628	18598	101	-25	123	-200	24	260
08-37.2197-102.5975-2-08-						0-C31319	27519	-55	-25	-4	65	17716	10	-25	99	-200	20	286
08-37.2344-102.6156-2-08-						0-C31320	27960	-55	30	-4	566	17296	15	29	87	-200	22	315
08-37.2406-102.5894-2-08-						0-C31321	36052	-55	-25	-4	187	16186	19	-25	79	-200	28	464
08-37.2461-102.6647-2-08-						0-C31324	26712	-55	36	-4	-25	16239	5	45	112	-200	25	166
08-37.2211-102.7139-2-08-						0-C31326	50734	60	-25	-4	-25	7408	10	-25	90	-200	23	280
08-37.1931-102.7433-2-08-						0-C31329	38931	-55	-25	-4	41	19929	7	-25	94	-200	19	292
08-37.1919-102.7158-2-08-						0-C31330	54374	-55	-25	-4	37	41409	11	-25	119	-200	39	227

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.1925-102.6742-2-08-			0-C31331				26980	-55	-25	-4	51	17974	8	-25	113	-200	27	1310	
08-37.1775-102.7350-2-08-			0-C31332				63971	59	-25	-4	83	32341	14	-25	110	-200	26	457	
08-37.2106-102.6339-2-08-			0-C31333				25672	-55	37	-4	47	16654	34	-25	108	-200	26	733	
08-37.1558-102.6325-2-08-			0-C31335				30090	61	-25	-4	1587	18125	39	-25	133	-200	25	1188	
08-37.1061-102.7325-2-08-			0-C31336				47098	-55	-25	-4	46	18621	10	-25	72	-200	21	985	
08-37.0806-102.7419-2-08-			0-C31337				43450	-55	-25	-4	58	13210	12	-25	118	-200	28	894	
08-37.1006-102.6300-2-08-			0-C31338				39799	-55	-25	-4	61	19780	8	38	115	-200	31	831	
08-37.0678-102.6336-2-08-			0-C31339				46921	-55	-25	-4	33	17208	27	-25	96	-200	29	1610	
08-37.0767-102.6700-2-08-			0-C31342				43527	-55	39	-4	30	13379	11	34	117	-200	30	647	
08-37.0822-102.7047-2-08-			0-C31343				51055	-55	38	-4	-25	15115	6	-25	162	-200	37	189	
08-37.0661-102.7047-2-08-			0-C31344				41818	66	30	-4	-25	16274	10	-25	124	-200	28	428	
08-37.0331-102.6911-2-08-			0-C31345				39761	-55	28	-4	836	15410	39	-25	113	-200	36	445	
08-37.0225-102.6522-2-08-			0-C31346				39767	-55	-25	-4	141	17889	17	-25	102	-200	28	272	
08-37.0189-102.6347-2-08-			0-C31347				45540	65	-25	-4	1300	26569	28	-25	119	-200	37	297	
08-37.0081-102.7056-2-08-			0-C31348				37237	-55	-25	-4	42	14804	11	-25	82	-200	21	719	
08-37.0044-102.7236-2-08-			0-C31351				63087	-55	43	-4	43	18445	5	30	116	-200	31	216	
08-37.0281-102.7375-2-08-			0-C31352				50971	-55	-25	-4	-25	22470	5	173	150	-200	24	120	
08-37.0372-102.7486-2-08-			0-C31353				61394	71	31	-4	49	36001	23	30	135	-200	40	236	
08-37.0883-102.6333-2-08-			0-C31354				47954	-55	52	-4	60	24042	22	67	148	-200	39	952	
08-37.1119-102.5403-2-08-			0-C31356				27232	-55	29	-4	112	16862	12	46	128	-200	25	444	
08-37.1703-102.5100-2-08-			0-C31357				27277	-55	-25	-4	-25	17843	6	58	94	-200	26	145	
08-37.1036-102.5272-2-08-			0-C31358				29998	-55	-25	-4	-25	19175	5	71	66	-200	26	1095	
08-37.0647-102.5592-2-08-			0-C31359				43612	69	-25	-4	53	21713	6	75	100	-200	19	199	
08-37.0622-102.5206-2-08-			0-C31360				37037	-55	-25	-4	51	18569	6	91	101	-200	18	74	
08-37.0483-102.5081-2-08-			0-C31361				37474	-55	-25	-4	-25	20913	4	189	80	-200	12	-50	
08-37.0331-102.5075-2-08-			0-C31362				39520	60	-25	-4	63	16781	7	54	89	-200	14	105	
08-37.0178-102.5161-2-08-			0-C31363				35579	-55	-25	-4	-25	22140	8	-25	-25	-200	9	847	
08-37.0156-102.5547-2-08-			0-C31364				39785	-55	-25	-4	41	22027	6	33	-25	-200	9	202	
08-37.0186-102.5822-2-08-			0-C31365				57525	64	-25	-4	-25	24216	4	45	-25	-200	8	97	
08-37.0014-102.5847-2-06-			0-C31367				21075	-55	-25	-4	42	19213	9	47	-25	-200	-4	-50	
08-37.0617-102.5914-2-08-			0-C31368				31115	-55	-25	-4	44	16205	6	-25	-25	-200	7	117	
08-37.0794-102.5728-2-08-			0-C31371				38358	-55	-25	-4	54	22427	18	-25	-25	-200	-4	1668	
08-37.1483-102.7672-2-08-			0-C31372				77285	59	-25	-4	2353	30296	37	-25	-25	-200	9	861	
08-37.1364-102.7794-2-08-			0-C31373				59164	-55	-25	-4	777	22828	143	37	-25	-200	5	1496	
08-37.1911-102.7661-2-08-			0-C31374				41758	-55	-25	-4	42	23399	8	61	-25	-200	10	1553	
08-37.2050-102.7828-2-08-			0-C31376				43316	60	-25	-4	28	21943	5	34	-25	-200	7	184	
08-37.2147-102.7775-2-08-			0-C31377				36146	-55	-25	-4	26	22073	4	75	-25	-200	8	194	
08-37.2072-102.8111-2-08-			0-C31378				34753	-55	-25	-4	-25	19582	-3	39	-25	-200	10	151	
08-37.2242-102.8511-2-08-			0-C31379				40235	-55	-25	-4	64	26468	6	50	-25	-200	14	272	
08-37.1969-102.8314-2-08-			0-C31381				38560	-55	-25	-4	35	20851	6	38	-25	-200	8	283	
08-37.1786-102.7572-2-08-			0-C31383				33103	-55	-25	-4	-25	19215	12	28	-25	-200	8	476	
08-37.6081-102.7117-2-08-			0-C31384				42352	-55	-25	-4	4004	33579	247	-25	-25	-200	-4	438	
08-37.6106-102.7428-2-08-			0-C31385				39327	-55	-25	-4	3534	27308	110	-25	-25	-200	-4	251	
08-37.4431-102.9281-2-08-			0-C31386				91745	-55	-25	-4	1582	62096	33	-25	-25	-200	-4	349	
08-37.4386-102.9389-2-07-			0-C31387				14124	-55	-25	-4	131	1468	11	-25	-25	-200	-4	187	
08-37.4839-102.9114-2-08-			0-C31388				94435	-55	-25	-4	4147	62701	224	-25	-25	-200	-4	202	
08-37.4881-102.9375-2-07-			0-C31389				24054	-55	-25	-4	288	2781	13	-25	-25	-200	-4	247	
08-37.4919-102.9511-2-08-			0-C31390				81280	59	-25	-4	12362	41696	180	-25	-25	-200	-4	231	
08-37.3800-102.9644-2-08-			0-C31392				42898	-55	-25	-4	12383	38385	258	-25	-25	-200	-4	408	
08-37.3775-102.9050-2-08-			0-C31393				53105	-55	-25	-4	9373	14265	87	-25	-25	-200	-4	932	
08-37.3983-102.8839-2-08-			0-C31394				46373	-55	-25	-4	183	15778	17	-25	-25	-200	-4	297	

[illegible]

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.3358-102.8739-2-08-						0-C31395	31999	82	-25	-4	1950	14038	23	-25	-25	-200	18	104	
08-37.4022-102.8072-2-08-						0-C31397	55682	77	-25	-4	43	7419	8	-25	-25	-200	13	87	
08-37.4114-102.8428-2-08-						0-C31398	28570	-55	-25	-4	2885	15318	34	-25	-25	-200	13	288	
08-37.4333-102.8228-2-08-						0-C31399	37699	73	-25	-4	451	24547	44	-25	60	-200	22	393	
08-37.4553-102.8364-2-06-						0-C31400	37671	59	-25	-4	94	6054	236	-25	26	-200	18	63	
08-37.4531-102.8353-2-08-						0-C31401	28203	-55	-25	-4	2641	18455	46	-25	-25	-200	17	316	
08-37.4817-102.8561-2-08-						0-C31402	91910	143	79	-4	345	61610	220	58	194	-200	39	485	
08-37.4806-102.8200-2-08-						0-C31403	36905	70	-25	-4	38	22390	63	-25	-25	-200	16	577	
08-37.4797-102.8017-2-08-						0-C31404	60142	97	-25	-4	7693	39496	237	-25	36	-200	121	260	
08-37.4508-102.7828-2-08-						0-C31405	260000	276	93	-4	49607	-2	348	-25	194	-200	41	307	
08-37.4119-102.7656-2-08-						0-C31406	3520	58	27	-4	228	4015	11	134	52	205	14	193	
08-37.3889-102.7697-2-08-						0-C31408	32016	101	-25	-4	55	18989	7	41	63	-200	16	288	
08-37.4342-102.7286-2-08-						0-C31410	91580	136	57	-4	108	18478	10	39	119	-200	31	223	
08-37.4803-102.7289-2-08-						0-C31411	64239	125	-25	-4	5947	65491	175	31	80	-200	21	591	
08-37.4856-102.6922-2-08-						0-C31412	97987	194	-25	-4	90	88760	10	110	151	-200	42	335	
08-37.4808-102.6564-2-08-						0-C31413	86751	176	-25	-4	291	73939	28	64	132	-200	34	2864	
08-37.4631-102.6822-2-08-						0-C31414	28877	74	28	-4	55	38820	72	60	62	289	29	269	
08-37.4553-102.6369-2-08-						0-C31415	149000	167	44	-4	216	63509	20	-25	141	-200	41	372	
08-37.4403-102.6714-2-08-						0-C31416	23124	69	78	-4	128	20522	49	84	142	407	28	119	
08-37.4164-102.6825-2-08-						0-C31417	73946	183	-25	-4	1678	93455	161	26	108	-200	30	177	
08-37.4039-102.6483-2-08-						0-C31418	166000	188	29	-4	260	90891	21	-25	132	-200	42	383	
08-37.3775-102.6314-2-08-						0-C31419	43599	107	73	-4	78	9412	6	74	119	-200	29	262	
08-37.3889-102.6975-2-08-						0-C31420	51973	126	56	-4	1227	15243	341	72	121	-200	29	482	
08-37.4128-102.7169-2-08-						0-C31421	41781	111	60	-4	4157	31895	102	89	136	-200	27	232	
08-37.4433-102.7056-2-08-						0-C31422	112000	157	39	-4	62	29309	8	-25	69	-200	33	181	
08-37.4425-102.6200-2-08-						0-C31423	59136	114	54	-4	66	27333	9	68	119	-200	33	218	
08-37.4983-102.5806-2-08-						0-C31424	48751	115	45	-4	38	36469	7	115	116	-200	28	143	
08-37.4978-102.5575-2-08-						0-C31425	68207	104	62	-4	55	21812	7	70	119	-200	34	177	
08-37.4561-102.5006-2-08-						0-C31427	90199	170	-25	-4	109	60092	15	64	89	-200	25	250	
08-37.4767-102.5031-2-08-						0-C31428	94191	179	37	-4	218	63808	14	75	113	-200	33	228	
08-37.4819-102.5322-2-08-						0-C31429	68382	142	31	-4	57	33911	12	102	94	-200	23	240	
08-37.4058-102.5103-2-08-						0-C31430	99354	174	95	-4	38	40473	11	97	154	-200	41	405	
08-37.3783-102.5056-2-08-						0-C31431	34228	87	64	-4	52	16205	7	119	117	-200	24	-50	
08-37.3828-102.5400-2-08-						0-C31433	38608	116	35	-4	-25	16261	11	64	83	-200	20	492	
08-37.3839-102.5850-2-08-						0-C31434	26085	99	132	-4	34	9310	10	168	218	441	35	410	
08-37.4064-102.5739-2-06-						0-C31435	45085	96	52	-4	43	8159	107	60	88	-200	19	140	
08-37.4258-102.5939-2-07-						0-C31436	26783	109	57	-4	166	4643	22	79	79	-200	22	251	
08-37.4289-102.5800-2-06-						0-C31437	113000	164	56	-4	73	39820	101	71	127	-200	37	250	
08-37.3742-102.6092-2-08-						0-C31438	37896	119	75	-4	57	13428	9	102	126	-200	30	369	
08-37.3375-102.5489-2-08-						0-C31439	23211	100	78	-4	222	5943	167	106	155	-200	34	189	
08-37.3572-102.5106-2-08-						0-C31441	65676	87	-25	-4	87	37825	10	-25	-25	-200	29	-50	
08-37.3164-102.5256-2-08-						0-C31442	81453	88	-25	-4	84	42082	21	-25	-25	-200	32	1010	
08-37.3306-102.5678-2-08-						0-C31444	84821	100	-25	-4	73	19395	8	-25	-25	-200	21	-50	
08-37.3308-102.6103-2-08-						0-C31445	235000	218	80	-4	116	56569	20	-25	135	-200	62	253	
08-37.2942-102.5692-2-08-						0-C31446	43432	61	-25	-4	318	25536	20	-25	-25	-200	17	-50	
08-37.2878-102.5356-2-08-						0-C31447	62865	93	-25	-4	146	19285	12	-25	-25	-200	16	456	
08-37.3072-102.5481-2-08-						0-C31448	37772	88	26	-4	180	17331	10	-25	-25	-200	24	58	
08-37.2942-102.5239-2-08-						0-C31449	47585	103	-25	-4	126	24255	9	-25	-25	-200	23	-50	
08-37.2647-102.5428-2-08-						0-C31450	236000	246	97	-4	232	87581	17	-25	222	-200	76	312	
08-37.2511-102.5719-2-08-						0-C31451	31147	63	-25	-4	349	18962	41	-25	-25	-200	18	219	
08-37.2644-102.6167-2-08-						0-C31452	68406	67	-25	-4	79	18340	11	-25	-25	-200	11	123	

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

①

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																							U CONCENTRATION						
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (µmho/cm)	SCINTILOMETER (eL ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (H) UNITS IN PPB	
							DATE	HOUR																											
08-37.2828-102.6147-2-08-						0-C31453-09/06/77-20-	21-19.0-C-	6.8-	425-	10-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.81		
08-37.3528-102.6089-2-08-						0-C31454-09/07/77-9-	30-17.0-C-	6.6-	340-	20-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.90	
08-37.3522-102.6278-2-08-						0-C31455-09/07/77-10-	28-14.5-C-	7.0-	625-	12-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.97	
08-37.3239-102.6281-2-08-						0-C31456-09/07/77-10-	28-17.0-C-	6.9-	750-	13-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.90	
08-37.2942-102.6731-2-08-						0-C31457-09/07/77-10-	28-20.0-C-	6.5-	415-	7-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.45	
08-37.2714-102.6714-2-08-						0-C31459-09/07/77-11-	28-18.0-C-	7.0-	410-	7-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.98	
08-37.2917-102.7061-2-08-						0-C31460-09/07/77-11-	29-18.0-C-	6.9-	330-	16-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.62	
08-37.2703-102.7242-2-08-						0-C31461-09/07/77-12-	29-21.0-C-	6.8-	330-	5-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.15	
08-37.2503-102.7319-2-08-						0-C31462-09/07/77-12-	32-14.5-C-	7.6-	260-	11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46.55*	
08-37.2939-102.7361-2-08-						0-C31464-09/07/77-13-	32-17.0-C-	7.0-	310-	7-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.97	
08-37.3081-102.7233-2-08-						0-C31465-09/07/77-13-	-20.0-C-	6.6-	330-	8-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.28	
08-37.3200-102.6947-2-08-						0-C31466-09/07/77-13-	33-20.5-C-	6.5-	560-	7-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25	
08-37.3244-102.7408-2-08-						0-C31467-09/07/77-14-	31-23.5-C-	7.1-	690-	7-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.65	
08-37.3697-102.7425-2-08-						0-C31468-09/07/77-14-	32-23.0-C-	6.7-	690-	11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.32	
08-37.3586-102.6733-2-08-						0-C31469-09/07/77-16-	33-16.5-C-	-	425-	13-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.31	
08-37.2633-102.6339-2-08-						0-C31470-09/07/77-14-	32-17.0-C-	6.7-	305-	7-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.83	
08-37.2858-102.6253-2-08-						0-C31471-09/07/77-17-	31-16.5-C-	-	525-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.13	
08-37.2683-102.7783-2-08-						0-C31472-09/07/77-17-	29-22.0-C-	7.1-	450-	10-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.58	
08-37.2639-102.8147-2-08-						0-C31473-09/07/77-18-	28-24.0-C-	6.7-	340-	10-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
08-37.2506-102.8600-2-08-						0-C31474-09/07/77-18-	28-24.0-C-	7.0-	470-	7-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.37	
08-37.2364-102.8492-2-08-						0-C31475-09/07/77-19-	26-18.0-C-	6.7-	910-	13-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.14	
08-37.3278-102.8497-2-08-						0-C31476-09/07/77-19-	24-17.0-C-	6.4-	305-	15-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
08-37.3472-102.8511-2-08-						0-C31477-09/07/77-19-	24-20.0-C-	6.5-	410-	16-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.34	
08-37.3625-102.8658-2-08-						0-C31478-09/07/77-20-	23-22.0-C-	6.7-	610-	19-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18	
08-37.1083-102.8606-2-08-						0-C31481-09/22/77-12-	26-17.5-C-	5.5-	370-	11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.93	
08-37.1122-102.8142-2-08-						0-C31482-09/22/77-13-	26-20.5-C-	7.1-	330-	13-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.57	
08-37.0519-102.8453-2-08-						0-C31485-09/22/77-15-	28-19.0-C-	7.2-	650-	9-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.45	
08-37.0197-102.8542-2-06-						0-C31486-09/22/77-16-	28-21.0-C-	7.2-	900-	10-1-6-4-7-2-2-1-2-6-5-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.36	
08-37.0019-102.8436-2-06-						0-C31487-09/22/77-17-	29-20.5-C-	7.4-	1050-	7-1-1-3-6-1-3-1-2-4-3-4-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.77	
08-37.0475-102.8358-2-06-						0-C31489-09/22/77-19-	24-16.0-C-	7.9-	145-	11-1-1-6-8-2-3-1-2-4-3-3-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25	
08-37.2381-102.7825-2-08-						0-C31490-09/29/77-13-	29-17.0-C-	6.7-	550-	6-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.00*
08-37.2406-102.7681-2-08-						0-C31491-09/29/77-14-	29-17.0-C-	6.8-	575-	11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.62	
08-37.1706-102.8697-2-08-						0-C31493-09/29/77-17-	29-23.0-C-	7.8-	440-	14-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.05	
08-37.0944-102.8122-2-08-						0-C31494-09/29/77-18-	27-18.5-C-	6.8-	390-	11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.33	
08-37.0767-102.8025-2-08-						0-C31495-09/29/77-18-	27-19.0-C-	6.9-	395-	12-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.81	
08-37.0717-102.7589-2-08-						0-C31496-09/29/77-19-	26-17.0-C-	7.0-	750-	9-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.12	
08-37.0497-102.7817-2-08-						0-C31497-09/30/77-10-	25-17.0-C-	7.3-	550-	11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.29	
08-37.0228-102.7742-2-07-						0-C31498-09/30/77-11-	25-18.5-C-	6.9-	90-	10-1-3-4-6-1-2-1-2-4-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17	
08-37.0053-102.7811-2-06-						0-C31500-09/30/77-13-	29-18.0-C-	7.2-	250-	9-1-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.92	
08-37.0747-102.9183-2-08-						0-C31502-09/30/77-15-	32-23.0-C-	7.5-	460-	8-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.92	
08-37.0344-102.9878-2-08-						0-C31503-09/30/77-16-	28-20.0-C-	7.2-	1025-	7-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.69	
08-37.0786-102.9750-2-08-						0-C31505-09/30/77-18-	26-16.0-C-	7.3-	410-	14-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.37	
08-37.0886-102.9331-2-08-						0-C31506-10/01/77-11-	19-16.0-C-	6.9-	395-	18-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.96	
08-37.0392-102.9497																																			

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER							ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY											
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)											
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn
08-37.2828-102.6147-2-08-			0-C31453				35153	57	-25	-4	82	23737	12	-25	-25	-200	16	1477
08-37.3528-102.6089-2-08-			0-C31454				41955	67	-25	-4	193	10209	44	-25	-25	-200	-4	573
08-37.3522-102.6278-2-08-			0-C31455				80756	109	-25	-4	82	23213	8	-25	-25	-200	16	112
08-37.3239-102.6281-2-08-			0-C31456				73686	108	-25	-4	116	36442	12	-25	-25	-200	18	52
08-37.2942-102.6731-2-08-			0-C31457				38471	73	-25	-4	640	24296	20	-25	-25	-200	13	1430
08-37.2714-102.6714-2-08-			0-C31459				49149	83	-25	-4	72	17648	8	-25	-25	-200	19	218
08-37.2917-102.7061-2-08-			0-C31460				36842	75	-25	-4	51	15433	17	-25	-25	-200	21	660
08-37.2703-102.7242-2-08-			0-C31461				46850	-55	26	-4	132	12323	330	-25	-25	-200	21	741
08-37.2503-102.7319-2-08-			0-C31462				31333	66	33	-4	38	14472	9	-25	-25	-200	21	95
08-37.2939-102.7361-2-08-			0-C31464				39909	68	-25	-4	43	13925	11	-25	-25	-200	14	157
08-37.3081-102.7233-2-08-			0-C31465				38301	-55	-25	-4	77	12623	120	-25	-25	-200	18	196
08-37.3200-102.6947-2-08-			0-C31466				42853	80	-25	-4	55	24952	11	-25	-25	-200	21	86
08-37.3244-102.7408-2-08-			0-C31467				58159	105	26	-4	34	23705	11	-25	-25	-200	25	1001
08-37.3597-102.7425-2-08-			0-C31468				37847	83	-25	-4	2085	31673	98	-25	-25	-200	24	67
08-37.3586-102.6733-2-08-			0-C31469				32878	77	-25	-4	198	27945	35	-25	-25	-200	13	83
08-37.2633-102.6339-2-08-			0-C31470				35460	75	-25	-4	172	13509	14	-25	-25	-200	11	83
08-37.2858-102.6253-2-08-			0-C31471				36054	103	-25	-4	1819	24556	16	-25	-25	-200	13	328
08-37.2683-102.7783-2-08-			0-C31472				29572	58	-25	-4	39	20203	8	-25	-25	-200	14	694
08-37.2639-102.8147-2-08-			0-C31473				27272	69	-25	-4	93	17228	29	-25	-25	-200	19	159
08-37.2506-102.8600-2-08-			0-C31474				40510	73	-25	-4	55	22245	15	-25	-25	-200	16	72
08-37.2364-102.8492-2-08-			0-C31475				76541	160	-25	-4	119	45424	31	-25	-25	-200	27	157
08-37.3278-102.8497-2-08-			0-C31476				30095	57	-25	-4	334	13987	37	-25	-25	-200	12	-50
08-37.3472-102.8511-2-08-			0-C31477				33124	75	-25	-4	3374	17741	55	-25	-25	-200	18	-50
08-37.3625-102.8658-2-08-			0-C31478				39393	81	-25	-4	92	27560	49	-25	-25	-200	12	3202
08-37.1083-102.8606-2-08-			0-C31481				49259	72	-25	-4	45	17756	52	-25	49	-200	24	487
08-37.1122-102.8142-2-08-			0-C31482				40053	-55	-25	-4	-25	13470	5	-25	80	-200	15	553
08-37.0619-102.8453-2-08-			0-C31485				53411	69	-25	-4	48	26690	6	-25	60	-200	21	542
08-37.0197-102.8542-2-06-			0-C31486				122000	130	31	-4	42	41987	69	-25	149	-200	30	151
08-37.0019-102.8436-2-06-			0-C31487				97397	108	-25	-4	57	62640	42	-25	104	-200	31	115
08-37.0475-102.8358-2-06-			0-C31489				25782	-55	37	-4	73	2032	5	-25	69	-200	20	-50
08-37.2381-102.7825-2-08-			0-C31490				46950	67	-25	-4	976	34318	23	-25	88	-200	18	911
08-37.2406-102.7681-2-08-			0-C31491				45740	76	-25	-4	312	32461	14	-25	-25	-200	-4	60
08-37.1706-102.8697-2-08-			0-C31493				36781	58	-25	-4	41	25789	6	-25	-25	-200	-4	427
08-37.0944-102.8122-2-08-			0-C31494				48111	64	-25	-4	1455	20487	43	-25	-25	-200	11	198
08-37.0767-102.8025-2-08-			0-C31495				46590	-55	-25	-4	1454	20362	44	-25	-25	-200	6	267
08-37.0717-102.7589-2-08-			0-C31496				55036	65	-25	-4	155	38143	19	-25	26	-200	11	193
08-37.0497-102.7817-2-08-			0-C31497				41747	71	-25	-4	55	40644	5	-25	-25	-200	7	-50
08-37.0228-102.7742-2-07-			0-C31498				13222	57	40	-4	333	2345	11	-25	67	-200	13	-50
08-37.0053-102.7811-2-06-			0-C31500				36798	-55	52	-4	-25	8554	5	-25	78	-200	16	-50
08-37.0747-102.9183-2-08-			0-C31502				62917	89	-25	-4	-25	15812	12	-25	26	-200	12	189
08-37.0844-102.9878-2-08-			0-C31503				102000	135	41	-4	2447	66670	84	-25	103	-200	24	138
08-37.0786-102.9750-2-08-			0-C31505				55655	77	37	-4	43	11974	11	-25	36	-200	19	278
08-37.0886-102.9331-2-08-			0-C31506				47027	77	28	-4	38	14496	5	-25	53	-200	21	209
08-37.0392-102.9497-2-08-			0-C31511				82734	139	-25	-4	54	69472	17	-25	45	-200	22	161
08-37.0294-102.9792-2-08-			0-C31512				50737	97	-25	-4	36	50183	6	-25	36	-200	20	293
08-37.0275-102.9875-2-07-			0-C31514				75530	117	-25	-4	81	78661	14	33	116	-200	28	163
08-37.0011-102.9761-2-07-			0-C31515				61842	107	51	-4	98	57040	35	63	118	-200	30	133
08-37.0028-102.9631-2-08-			0-C31516				44929	103	-25	-4	46	53583	6	35	43	-200	20	300
08-37.1289-102.8908-2-08-			0-C31517				87197	109	49	-4	108	10708	30	-25	75	-200	23	39182
08-37.1214-102.9139-2-08-			0-C31518				48257	93	51	-4	50	22044	6	52	56	-200	24	242
08-37.0353-102.8794-2-08-			0-C31520				48755	83	-25	-4	772	13323	19	-25	34	-200	15	451

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

①

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																												U CONCENTRATION		
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REF DATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SCINTILOMETER (eL/ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (6) UNITS IN ppb		
							DATE	HOUR																												
08-37.1569-102.9778-2-08-						0-C31522-10/03/77-17-			24-19.5-C-	-	7.2-	525-			10-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.19		
08-37.1814-102.9936-2-08-						0-C31523-10/03/77-17-			24-16.0-C-	-	7.1-	675-			10-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.12	
08-37.2069-102.9828-2-08-						0-C31524-10/03/77-18-			24-21.0-C-	-	7.1-	575-			9-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	
08-37.6522-102.9522-2-08-						0-C31526-10/04/77-17-			20-12.0-	-	7.2-	1100-			11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
08-37.1592-102.9231-2-08-						0-C31529-10/02/77-12-			19-16.0-C-	-	7.2-	480-			13-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.87	
08-37.1867-102.9050-2-08-						0-C31531-10/02/77-13-			19-18.0-C-	-	7.3-	460-			11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.68	
08-37.2206-102.9100-2-08-						0-C31533-10/02/77-15-			18-17.0-C-	-	7.1-	590-			8-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.04	
08-37.2394-102.8867-2-08-						0-C31534-10/02/77-16-			18-16.0-C-	-	7.2-	385-			11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.91	
08-37.2025-102.9400-2-08-						0-C31536-10/02/77-17-			18-	-	7.2-	625-			13-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.81	
08-37.2444-102.9572-2-08-						0-C31537-10/02/77-18-			18-20.0-C-	-	7.0-	850-			13-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.59	
08-37.0017-102.9342-2-08-						0-C31538-10/03/77-11-			22-15.0-C-	-	7.3-	900-			11-1-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.46	
08-37.6275-102.9969-2-08-						0-C31540-10/04/77-18-			20-	-	7.0-	825-			5-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.76	
08-37.7403-102.9714-2-08-						0-C31543-10/04/77-12-			20-12.0-	-	7.1-	1600-			11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.95	
08-37.7156-102.9778-2-08-						0-C31544-10/04/77-13-			17-16.0-	-	7.0-	2100-			11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.09	
08-37.6675-102.9936-2-08-						0-C31545-10/05/77-13-			17-13.3-	-	7.0-	1300-			2-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
08-37.3997-102.4731-2-06-						0-C31547-09/29/77-11-			27-24.5-C-	-	7.4-	575-			10-1-1-4-1-2-2-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.21		
08-37.3833-102.4542-2-08-						0-C31548-09/29/77-			30-24.0-	-	7.4-	55-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.23	
08-37.3969-102.4525-2-06-						0-C31549-09/29/77-13-			32-25.0-	-	7.6-	1950-			9-1-1-6-8-2-2-5-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76.00*	
08-37.4100-102.4872-2-06-						0-C31550-09/29/77-14-			33-30.0-	-	8.1-	760-			8-1-1-4-1-2-2-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.56	
08-37.4592-102.4708-2-08-						0-C31552-09/29/77-14-			32-20.0-	-	7.1-	100-			11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.91
08-37.4736-102.4264-2-08-						0-C31554-09/29/77-15-			30-18.0-	-	7.2-	795-			17-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.42	
08-37.4494-102.4003-2-08-						0-C31558-09/29/77-17-			29-18.0-	-	7.4-	525-			13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.58	
08-37.4486-102.3639-2-08-						0-C31559-09/29/77-18-			27-18.0-	-	7.2-	620-			11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.30	
08-37.4692-102.3500-2-08-						0-C31560-09/29/77-18-			27-23.0-	-	7.4-	1000-			10-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.45	
08-37.3847-102.4106-2-08-						0-C31562-09/29/77-19-			27-18.0-	-	7.3-	512-			13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.85	
08-37.3836-102.3606-2-08-						0-C31563-09/30/77-			23-16.0-	-	7.4-	410-			10-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.05	
08-37.4058-102.2919-2-08-						0-C31564-09/30/77-10-			29-19.0-	-	6.8-	490-			13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.05	
08-37.4128-102.3450-2-08-						0-C31565-09/30/77-10-			29-19.0-	-	7.2-	385-			16-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.29	
08-37.4203-102.3642-2-08-						0-C31566-09/30/77-11-			30-19.0-	-	7.2-	790-			11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.96	
08-37.4375-102.3553-2-08-						0-C31567-09/30/77-11-			31-18.0-	-	7.6-	545-			9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.13	
08-37.4633-102.2911-2-08-						0-C31568-09/30/77-12-			34-20.0-	-	7.5-	750-			6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.67	
08-37.4825-102.3300-2-08-						0-C31569-09/30/77-12-			34-17.0-	-	7.3-	900-			16-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27.80*	
08-37.4875-102.2950-2-06-						0-C31573-09/30/77-14-			37-26.0-	-	7.8-	1040-			9-1-6-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.11	
08-37.4764-102.2261-2-08-						0-C31574-09/30/77-15-			35-20.0-	-	7.4-	1440-			15-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.55	
08-37.4189-102.2558-2-08-						0-C31575-09/30/77-15-			35-34.0-	-	7.3-	550-			18-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.23	
08-37.3761-102.2047-2-08-						0-C31576-09/30/77-15-			34-18.0-	-	7.3-	720-			11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.00	
08-37.3933-102.1825-2-08-						0-C31577-09/30/77-16-			35-24.0-	-	7.4-	590-			8-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.23	
08-37.3883-102.1261-2-08-						0-C31578-09/30/77-16-			34-24.0-C-	-	8.5-	510-			9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.67	
08-37.3975-102.1553-2-08-						0-C31579-09/30/77-17-			33-23.0-	-	7.2-	1620-			11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.18	
08-37.4422-102.1481-2-08-						0-C31580-09/30/77-17-			31-21.0-C-	-	8.7-	760-			16-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.64	
08-37.4683-102.1300-2-07-						0-C31581-09/30/77-18-			31-22.0-	-	7.3-	830-			4-1-6-4-7-1-2-2-3-4-2-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.46		
08-37.4989-102.1103-2-08-						0-C31582-09/30/77-18-			29-16.0-	-	7.2-	1000-			15-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.32	
08-37.5006-102.1633-2-08-						0-C31585-10/01/77-11-			24-21.0-	-	7.2-	850-			17-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
08-37.4864-102.0719-2-08-						0-C31587-10/01/77-11-			26-16.5-	-	7.4-	925-</																								

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.1569-102.9778-2-08-			0-C31522				35466	106	-25	-4	41	24914	8	-25	-25	-200	-4	851	
08-37.1814-102.9935-2-08-			0-C31523				55591	75	28	-4	8335	31532	77	-25	91	-200	20	197	
08-37.2069-102.9828-2-08-			0-C31524				50187	90	-25	-4	148	28338	11	-25	-25	-200	19	455	
08-37.6522-102.9522-2-08-			0-C31526				116700	174	-25	-4	30	76686	1616	-25	119	-200	30	729	
08-37.1592-102.9231-2-08-			0-C31529				44765	75	101	-4	78	25269	45	74	143	-200	33	497	
08-37.1867-102.9050-2-08-			0-C31531				55561	83	39	-4	53	22476	5	-25	78	-200	22	1177	
08-37.2206-102.9100-2-08-			0-C31533				48254	83	-25	-4	30	27470	18	-25	58	-200	19	822	
08-37.2394-102.8867-2-08-			0-C31534				44555	107	-25	-4	31	22046	6	-25	80	-200	19	552	
08-37.2025-102.9400-2-08-			0-C31536				51219	78	-25	-4	54	32019	7	-25	83	-200	20	607	
08-37.2444-102.9572-2-08-			0-C31537				63979	68	-25	-4	45	43334	8	-25	80	-200	19	635	
08-37.0017-102.9342-2-08-			0-C31538				93954	128	-25	-4	43	38841	5	-25	59	-200	19	400	
08-37.6275-102.9969-2-08-			0-C31540				79659	104	37	-4	26	32077	18	83	27	-200	26	286	
08-37.7403-102.9714-2-08-			0-C31543				70356	134	-25	-4	7605	55856	159	-25	45	-200	16	272	
08-37.7156-102.9778-2-08-			0-C31544				264000	236	127	-4	177	93280	15	28	242	-200	74	391	
08-37.6675-102.9936-2-08-			0-C31545				96366	199	156	-4	96	94573	2985	222	329	277	64	324	
08-37.3997-102.4731-2-06-			0-C31547				776	1210	861	1054	1097	1243	1172	-25	788	-200	-4	1063	
08-37.3833-102.4542-2-08-			0-C31548				44177	89	-25	-4	125	25192	10	-25	-25	-200	15	115	
08-37.3969-102.4525-2-06-			0-C31549				137000	220	-25	-4	83	118000	162	-25	-25	-200	27	62	
08-37.4100-102.4872-2-06-			0-C31550				84728	133	-25	-4	71	22894	125	-25	-25	-200	-4	-50	
08-37.4592-102.4708-2-08-			0-C31552				69892	140	-25	-4	79	43336	15	-25	-25	-200	-4	4392	
08-37.4736-102.4264-2-08-			0-C31554				71067	158	-25	-4	119	29974	12	-25	70	-200	22	65	
08-37.4494-102.4003-2-08-			0-C31558				50036	108	-25	-4	232	28810	20	-25	-25	-200	19	112	
08-37.4486-102.3639-2-08-			0-C31559				67741	122	-25	-4	69	26445	10	-25	-25	-200	10	157	
08-37.4692-102.3500-2-08-			0-C31560				81688	155	-25	-4	83	49437	14	-25	55	-200	20	411	
08-37.3847-102.4106-2-08-			0-C31562				28159	84	-25	-4	144	22146	24	-25	-25	-200	14	456	
08-37.3836-102.3606-2-08-			0-C31563				46543	102	-25	-4	106	13749	12	-25	-25	-200	11	349	
08-37.4058-102.2919-2-08-			0-C31564				42423	108	-25	-4	76	25287	10	-25	-25	-200	10	640	
08-37.4128-102.3450-2-08-			0-C31565				42827	84	27	-4	165	14321	23	-25	-25	-200	13	401	
08-37.4203-102.3642-2-08-			0-C31566				57162	95	-25	-4	122	30134	13	-25	50	-200	21	310	
08-37.4375-102.3553-2-08-			0-C31567				36508	95	35	-4	100	29757	13	33	62	-200	23	570	
08-37.4633-102.2911-2-08-			0-C31568				71266	119	31	-4	101	23297	9	-25	47	-200	20	148	
08-37.4825-102.3300-2-08-			0-C31569				78978	146	28	-4	1502	36977	46	-25	77	-200	23	1563	
08-37.4875-102.2950-2-06-			0-C31573				89535	135	-25	-4	131	37547	593	-25	42	-200	26	67	
08-37.4764-102.2261-2-08-			0-C31574				100000	175	-25	-4	124	64849	18	28	84	-200	27	275	
08-37.4189-102.2558-2-08-			0-C31575				44925	112	54	-4	110	27460	22	40	92	-200	21	852	
08-37.3761-102.2047-2-08-			0-C31576				57003	114	29	-4	82	27709	13	-25	-25	-200	21	115	
08-37.3933-102.1825-2-08-			0-C31577				44841	67	-25	-4	78	35079	11	36	64	-200	17	231	
08-37.3883-102.1261-2-08-			0-C31578				41384	65	-25	-4	75	28807	14	-25	-25	-200	-4	55	
08-37.3975-102.1553-2-08-			0-C31579				110000	151	-25	-4	160	78593	26	-25	66	-200	31	1274	
08-37.4422-102.1481-2-08-			0-C31580				66328	147	-25	-4	99	27970	58	-25	63	-200	13	124	
08-37.4683-102.1300-2-07-			0-C31581				76115	130	-25	-4	206	34060	573	-25	57	-200	30	-50	
08-37.4989-102.1103-2-08-			0-C31582				54089	99	35	-4	85	43602	19	34	107	-200	24	530	
08-37.5006-102.1633-2-08-			0-C31586				50242	126	-25	-4	1822	44224	45	-25	-25	-200	10	626	
08-37.4864-102.0719-2-08-			0-C31587				69717	115	-25	-4	126	30204	13	-25	-25	-200	14	98	
20-37.4625-102.0125-2-08-			0-C31589				44851	108	-25	-4	180	36790	32	-25	-25	-200	16	98	
20-37.4400-102.0075-2-08-			0-C31590				51885	119	-25	-4	74	60304	28	-25	-25	-200	17	805	
20-37.4181-102.0169-2-09-			0-C31591				33375	87	-25	-4	63	42629	36	-25	44	-200	20	353	
20-37.3897-102.0006-2-08-			0-C31592				85903	138	-25	-4	66	73269	19	-25	67	-200	26	324	
08-37.3525-102.0592-2-08-			0-C31593				103000	194	-25	-4	72	65963	15	-25	55	-200	28	156	
20-37.3347-102.0406-2-08-			0-C31594				58634	110	-25	-4	70	51701	11	-25	37	-200	21	133	
20-37.3525-102.0244-2-03-			0-C31595				124000	199	37	-4	120	83980	30	-25	148	-200	40	125	

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																										U CONCENTRATION			
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	CONDUCTIVITY (umho/cm)	SCINTILOMETER (rel ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (H)	UNITS IN PPB
							DATE	HOUR																											
20-37.3122-102.0208-2-08-						0-C31596-10/01/77-16-			27-21.0-	-	-	7.4-	1000-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.59	
20-37.2778-102.0256-2-08-						0-C31597-10/01/77-17-			28-18.0-	-	-	7.4-	650-	15-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.77	
08-37.2494-102.0753-2-08-						0-C31599-10/01/77-17-			28-17.0-	-	-	8.2-	495-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.41	
08-37.2661-102.1131-2-08-						0-C31600-10/01/77-13-			-23.0-	-	-	7.4-	512-	21-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.30	
08-37.2881-102.1053-2-08-						0-C31601-10/01/77-18-			24-16.0-	-	-	7.6-	550-	10-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.29	
08-37.4506-102.0908-2-08-						0-C31602-10/02/77-9-			13-15.0-	-	-	7.2-	1000-	15-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.67	
08-37.4475-102.0611-2-08-						0-C31603-10/02/77-10-			17-18.0-	-	-	7.2-	650-	4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
08-37.4278-102.1056-2-08-						0-C31605-10/02/77-11-			14-17.0-	-	-	7.3-	850-	22-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.57	
08-37.4008-102.0978-2-08-						0-C31606-10/02/77-11-			14-15.0-	-	-	7.3-	910-	11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.75	
08-37.3806-102.1219-2-08-						0-C31607-10/02/77-12-			18-16.0-	-	-	7.2-	775-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.70	
08-37.3550-102.1033-2-08-						0-C31608-10/02/77-12-			21-17.5-	-	-	7.0-	1350-	8-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.40	
08-37.3225-102.0953-2-08-						0-C31609-10/02/77-13-			21-18.0-	-	-	6.8-	1650-	16-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.90	
08-37.3019-102.0769-2-08-						0-C31610-10/02/77-14-			21-18.0-	-	-	7.3-	500-	11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.70	
08-37.2942-102.1883-2-08-						0-C31614-10/02/77-16-			22-19.0-	-	-	7.4-	525-	16-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.48	
08-37.2875-102.1300-2-08-						0-C31615-10/02/77-17-			21-16.0-	-	-	7.4-	575-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.03	
08-37.3061-102.1511-2-08-						0-C31616-10/02/77-17-			19-17.0-	-	-	8.7-	365-	16-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.52	
08-37.3553-102.1303-2-08-						0-C31617-10/02/77-18-			20-17.0-	-	-	6.7-	1500-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.30	
08-37.3536-102.2406-2-08-						0-C31620-10/03/77-10-			19-21.0-	-	-	7.3-	650-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.66	
08-37.3600-102.2875-2-08-						0-C31621-10/03/77-11-			21-16.0-	-	-	7.3-	-	12-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.85	
08-37.3689-102.3364-2-08-						0-C31622-10/03/77-12-			25-19.0-	-	-	7.7-	480-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.97	
08-37.3525-102.3731-2-08-						0-C31624-10/03/77-12-			29-13.0-	-	-	7.5-	550-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.65	
08-37.3506-102.3117-2-08-						0-C31626-10/03/77-13-			27-16.0-	-	-	7.4-	850-	12-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.34	
08-37.3439-102.2181-2-08-						0-C31628-10/03/77-14-			31-17.5-	-	-	7.4-	500-	10-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.81	
08-37.3242-102.2111-2-08-						0-C31629-10/03/77-15-			32-21.0-	-	-	7.7-	435-	18-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.34	
08-37.3100-102.2328-2-08-						0-C31630-10/03/77-15-			30-16.5-	-	-	7.3-	810-	16-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.39	
08-37.2803-102.2481-2-08-						0-C31631-10/03/77-16-			30-19.0-	-	-	7.6-	550-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.00	
08-37.3092-102.2692-2-08-						0-C31632-10/03/77-16-			30-17.0-	-	-	7.2-	850-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.86	
08-37.3089-102.3014-2-08-						0-C31633-10/03/77-17-			27-19.0-	-	-	7.2-	1050-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.95	
08-37.2553-102.2769-2-08-						0-C31634-10/03/77-17-			29-20.0-	-	-	9.0-	875-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.54	
08-37.2614-102.3506-2-08-						0-C31635-10/03/77-18-			27-18.5-	-	-	7.7-	1210-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.70	
08-37.2511-102.3633-2-08-						0-C31636-10/03/77-18-			26-17.5-	-	-	7.4-	750-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.84	
08-37.2931-102.3681-2-08-						0-C31637-10/03/77-19-			26-21.0-	-	-	7.3-	700-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.55	
08-37.2194-102.4875-2-08-						0-C31639-10/01/77-10-			27-14.0-C-	-	-	-	800-	22-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.57	
08-37.2083-102.4419-2-08-						0-C31640-10/01/77-10-			29-13.8-C-	-	-	-	450-	11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.56	
08-37.1769-102.4803-2-08-						0-C31641-10/01/77-11-			29-18.2-C-	-	-	-	550-	16-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.71	
08-37.1725-102.4567-2-08-						0-C31642-10/01/77-11-			29-16.2-C-	-	-	-	3500-	19-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
08-37.1339-102.4586-2-08-						0-C31644-10/01/77-11-			31-17.2-C-	-	-	-	3800-	0-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.21	
08-37.1575-102.4353-2-08-						0-C31645-10/01/77-11-			31-18.6-	-	-	7.3-	550-	27-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.75	
08-37.1492-102.3981-2-08-						0-C31646-10/01/77-11-			30-17.2-	-	-	7.4-	500-	11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.50	
08-37.1914-102.4086-2-08-						0-C31647-10/01/77-13-			30-20.8-	-	-	7.3-	700-	5-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.75	
08-37.1911-102.3931-2-08-						0-C31648-10/01/77-13-			31-21.5-	-	-	7.3-	520-	16-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.75	
08-37.2364-102.3758-2-08-						0-C31649-10/01/77-14-			31-24.5-	-	-	7.4-	510-	2-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00	
08-37.2356-102.4467-2-08-						0-C31650-10/01/77-13-			33-18.2-	-	-	7.4-	400-	5-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.25	
08-37.1853-102.3125-2-08-						0-C31651-10/01/77-14-			31-19.0-	-	-	7.4-	400-	11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.08	
08-37.2436-102.3406-2-08-						0-C31656-10/01/77-15-			30-17.6-	-	-	7.8-	450-	19-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.57	
08-37.2167-102.3319-2-08-						0-C31657-10/01/77-16-			27-20.2-	-	-	7.7-	700-	8-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.38	
08-37.1619-102.3664-2-08-						0-C31658-10/02/77-10-			15-15.8-	-	-	7.3-	420-	20-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.31	
08-37.1386-102.3725-2-08-						0-C31659-10/02/77-10-			16-16.0-C-	-	-	6.7-	600-	4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.20	
08-37.1644-102.3225-2-08-						0-C31660-10/02/77-10-			16-16.0-	-	-	6.5-	425-	15-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.85	
08-37.1636-102.2511-2-08-						0-C31661-10/02/77-11-			18-16.0-C-	-	-	7.1-	420-	11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.00	
08-37.1344-102.2725-2-08-						0-C31662-10/02/77-11-			19-17.0-	-	-	6.9-	465-	9-	-	-	-	-	-	-	-</														

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
20-37.3122-102.0208-2-08-						0-C31596	33797	129	-25	-4	576	57412	31	42	95	205	17	556	
20-37.2779-102.0256-2-08-						0-C31597	29694	83	-25	-4	58	43904	9	-25	-25	-200	-4	85	
08-37.2494-102.0753-2-08-						0-C31599	24586	65	-25	-4	80	30587	10	-25	-25	-200	-4	-50	
08-37.2661-102.1131-2-08-						0-C31600	30342	62	-25	-4	67	30307	8	-25	-25	-200	9	1875	
08-37.2881-102.1053-2-08-						0-C31601	28179	134	35	-4	92	39904	14	49	123	-200	25	830	
08-37.4506-102.0908-2-08-						0-C31602	77659	151	39	-4	97	49827	14	-25	114	-200	31	108	
08-37.4475-102.0611-2-08-						0-C31603	29478	120	-25	-4	1496	45233	33	37	91	-200	25	1420	
08-37.4278-102.1056-2-08-						0-C31605	57911	121	-25	-4	83	43762	14	-25	108	-200	27	213	
08-37.4008-102.0978-2-08-						0-C31606	48465	126	-25	-4	101	48109	12	29	100	-200	21	482	
08-37.3806-102.1219-2-08-						0-C31607	87653	120	39	-4	165	18755	13	-25	120	-200	22	450	
08-37.3550-102.1033-2-08-						0-C31608	117000	149	31	-4	98	74557	13	-25	175	-200	33	260	
08-37.3225-102.0953-2-08-						0-C31609	131000	205	26	-4	102	91145	15	-25	216	-200	39	345	
08-37.3019-102.0769-2-08-						0-C31610	35136	112	62	-4	71	31626	13	42	145	-200	25	224	
08-37.2942-102.1883-2-08-						0-C31614	30379	100	50	-4	84	28514	12	-25	166	-200	25	1463	
08-37.2875-102.1300-2-08-						0-C31615	29531	122	-25	-4	80	34572	14	26	164	-200	21	394	
08-37.3361-102.1511-2-08-						0-C31616	25385	84	74	-4	104	21962	15	79	171	-200	26	-50	
08-37.3553-102.1303-2-08-						0-C31617	132000	181	-25	-4	103	74854	15	-25	215	-200	33	241	
08-37.3536-102.2406-2-08-						0-C31620	57857	121	58	-4	81	27544	12	-25	184	-200	29	421	
08-37.3600-102.2875-2-08-						0-C31621	53391	149	44	-4	131	24545	16	-25	151	-200	18	124	
08-37.3689-102.3364-2-08-						0-C31622	55158	147	62	243	309	18067	31	-25	184	-200	25	382	
08-37.3525-102.3731-2-08-						0-C31624	37155	124	71	-4	278	23664	22	37	220	-200	27	279	
08-37.3506-102.3117-2-08-						0-C31626	89618	174	-25	-4	155	38496	15	-25	142	-200	18	166	
08-37.3439-102.2181-2-08-						0-C31628	44287	139	61	-4	139	22789	15	32	181	-200	26	123	
08-37.3242-102.2111-2-08-						0-C31629	34149	127	74	-4	78	22082	19	52	143	-200	26	505	
08-37.3100-102.2328-2-08-						0-C31630	74042	154	37	-4	129	45865	16	-25	125	-200	26	210	
08-37.2803-102.2481-2-08-						0-C31631	30384	128	60	-4	102	29442	16	70	176	-200	31	123	
08-37.3092-102.2692-2-08-						0-C31632	71329	158	42	-4	91	35592	13	-25	131	-200	27	126	
08-37.3089-102.3014-2-08-						0-C31633	89404	174	69	-4	255	45484	17	-25	186	-200	35	362	
08-37.2553-102.2769-2-08-						0-C31634	12809	134	36	-4	184	37798	20	87	171	2311	61	2303	
08-37.2614-102.3506-2-08-						0-C31635	34546	131	74	-4	94	34120	47	47	182	-200	27	723	
08-37.2511-102.3633-2-08-						0-C31636	62908	173	36	-4	107	50170	17	31	164	-200	27	155	
08-37.2931-102.3681-2-08-						0-C31637	63076	116	75	-4	122	35194	18	37	233	-200	30	611	
08-37.2194-102.4875-2-08-						0-C31639	100000	98	-25	-4	78	45950	11	-25	3460	-200	12	251	
08-37.2083-102.4419-2-08-						0-C31640	57426	-55	-25	-4	26	37675	4	-25	65	-200	13	195	
08-37.1769-102.4803-2-08-						0-C31641	51789	60	-25	-4	198	46884	5	-25	56	-200	11	145	
08-37.1725-102.4567-2-08-						0-C31642	23891	-55	-25	-4	332	17576	29	-25	35	-200	8	585	
08-37.1337-102.4586-2-08-						0-C31644	34681	-55	-25	-4	251	33924	-3	-25	53	-200	8	189	
08-37.1575-102.4353-2-08-						0-C31645	45530	-55	-25	-4	122	27049	23	-25	66	-200	13	1935	
08-37.1492-102.3981-2-08-						0-C31646	43378	-55	-25	-4	242	34330	6	-25	76	-200	10	1040	
08-37.1914-102.4086-2-08-						0-C31647	56610	63	-25	-4	224	53140	-3	-25	88	-200	18	252	
08-37.1911-102.3931-2-08-						0-C31648	43930	-55	-25	-4	114	40338	-3	-25	45	-200	9	196	
08-37.2364-102.3758-2-08-						0-C31649	39434	-55	-25	-4	55	26730	-3	-25	135	-200	19	389	
08-37.2356-102.4467-2-08-						0-C31650	45926	-55	26	-4	1083	25440	13	-25	128	-200	19	1027	
08-37.1853-102.3125-2-08-						0-C31651	33636	-55	-25	-4	87	32260	-3	-25	95	-200	13	292	
08-37.2436-102.3406-2-08-						0-C31656	34345	-55	-25	-4	271	34938	13	-25	64	-200	13	178	
08-37.2167-102.3319-2-08-						0-C31657	61395	71	-25	-4	32	51000	10	-25	135	-200	19	2032	
08-37.1619-102.3664-2-08-						0-C31658	41976	-55	-25	-4	178	36017	17	-25	79	-200	11	463	
08-37.1386-102.3725-2-08-						0-C31659	53395	57	-25	-4	76	51411	9	-25	138	-200	18	2499	
08-37.1644-102.3225-2-08-						0-C31660	35267	-55	-25	-4	159	36632	21	-25	110	-200	7	437	
08-37.1636-102.2511-2-08-						0-C31661	35348	-55	-25	-4	46	38024	10	-25	176	-200	13	232	
08-37.1344-102.2725-2-08-						0-C31662	42762	-55	-25	-4	149	35835	6	-25	149	-200	15	193	

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																				U CONCENTRATION							
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SCINTILOMETER (el ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (N) UNITS IN PPB
							DATE	HOUR																									
08-37.1350-102.2400-2-08-						0-C31663-10/02/77-11-			18-17.0-	-		7.1-	475-	4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.50	
08-37.1258-102.1556-2-08-						0-C31666-10/02/77-12-			22-17.0-	-		6.7-	430-	2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.25	
08-37.1567-102.1306-2-08-						0-C31667-10/02/77-13-			22-18.0-	-		7.1-	495-	11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.43	
08-37.2283-102.1314-2-08-						0-C31669-10/02/77-13-			20-16.0-	-		7.1-	510-	18-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.00	
08-37.2069-102.1761-2-08-						0-C31670-10/02/77-14-			21-20.0-	-		7.2-	400-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19.50*	
08-37.2367-102.1869-2-08-						0-C31671-10/02/77-15-			20-22.0-	-		7.1-	500-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.37	
08-37.2433-102.2189-2-08-						0-C31674-10/02/77-15-			22-21.0-	-		7.2-	500-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.21	
08-37.1792-102.2394-2-08-						0-C31675-10/02/77-16-			24-17.2-	-		6.8-	400-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.44	
08-37.1781-102.2133-2-08-						0-C31676-10/02/77-16-			24-20.0-	-		7.0-	580-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.51	
08-37.1942-102.1125-2-08-						0-C31678-10/02/77-17-			24-20.0-	-		6.9-	480-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.76	
08-37.1600-102.1039-2-08-						0-C31679-10/02/77-17-			22-15.5-	-		6.4-	550-	18-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.20	
08-37.1689-102.0572-2-08-						0-C31680-10/02/77-18-			23-22.0-	-		7.1-	500-	2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.60	
20-37.1547-102.0303-2-08-						0-C31681-10/03/77-9-			17-15.0-	-		7.1-	610-	15-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.40	
20-37.1825-102.0111-2-08-						0-C31682-10/02/77-10-			18-16.0-	-		6.8-	650-	6-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.00	
20-37.2147-102.0300-2-08-						0-C31683-10/02/77-10-			19-20.0-	-		7.2-	900-	11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.20	
20-37.2142-102.0331-2-08-						0-C31684-10/02/77-10-			22-16.0-C-	-		6.9-	800-	18-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.00	
08-37.2219-102.0494-2-08-						0-C31686-10/03/77-11-			24-17.0-	-		6.3-	410-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.57	
08-37.2447-102.1211-2-08-						0-C31688-10/03/77-12-			23-16.0-C-	-		6.0-	400-	11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.09	
20-37.1122-102.0397-2-08-						0-C31689-10/03/77-14-			27-17.2-	-		7.3-	580-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.61	
20-37.1011-102.0150-2-08-						0-C31690-10/03/77-15-			28-19.0-	-		-	1100-	27-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.31	
20-37.0858-102.0328-2-08-						0-C31692-10/03/77-15-			28-16.8-C-	-		6.8-	460-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.86	
08-37.0900-102.0622-2-08-						0-C31694-10/03/77-16-			27-17.0-	-		6.7-	410-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.02	
08-37.0861-102.0769-2-08-						0-C31695-10/03/77-17-			26-16.5-	-		6.4-	410-	2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.16	
08-37.0833-102.1125-2-08-						0-C31697-10/03/77-18-			24-16.2-	-		6.4-	890-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.01	
08-37.1128-102.4536-2-08-						0-C31698-10/04/77-9-			24-18.5-C-	-		7.2-	472-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.31	
08-37.1169-102.4039-2-08-						0-C31699-10/04/77-9-			28-16.0-C-	-		6.8-	425-	15-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.76	
08-37.0811-102.3950-2-08-						0-C31702-10/04/77-11-			28-18.0-	-		6.6-	350-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.27	
08-37.0714-102.4944-2-08-						0-C31703-10/04/77-11-			26-16.0-C-	-		6.6-	450-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.28	
08-37.0481-102.4356-2-08-						0-C31705-10/04/77-12-			28-18.0-	-		6.6-	495-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.69	
08-37.0058-102.4836-2-08-						0-C31706-10/04/77-14-			26-20.0-C-	-		6.8-	430-	4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.31	
08-37.0031-102.4192-2-08-						0-C31707-10/04/77-14-			32-20.0-	-		6.8-	415-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.69	
08-37.0200-102.4117-2-08-						0-C31708-10/04/77-15-			29-18.5-	-		6.2-	550-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.08	
08-37.0092-102.3814-2-08-						0-C31711-10/04/77-16-			31-20.0-	-		6.2-	360-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28	
08-37.0017-102.3597-2-08-						0-C31712-10/04/77-17-			29-18.0-	-		6.0-	490-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.54	
08-37.0325-102.3258-2-08-						0-C31713-10/04/77-18-			27-17.0-	-		6.2-	485-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.62	
08-37.0047-102.2994-2-08-						0-C31714-10/04/77-18-			27-17.0-	-		6.2-	440-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.76	
08-37.0650-102.3664-2-08-						0-C31715-10/05/77-11-			13-15.2-	-		7.8-	410-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.27	
08-37.0819-102.3528-2-08-						0-C31716-10/05/77-11-			15-16.0-	-		7.8-	390-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.46	
08-37.0831-102.3203-2-08-						0-C31717-10/05/77-11-			14-13.0-	-		7.4-	440-	2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.58	
08-37.1094-102.3519-2-08-						0-C31719-10/05/77-12-			15-16.0-	-		7.7-	380-	11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.24	
08-37.0219-102.2758-2-08-						0-C31723-10/05/77-14-			16-18.2-	-		7.1-	540-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.75	
08-37.0606-102.2622-2-08-						0-C31724-10/05/77-14-			18-13.5-	-		6.8-	560-	11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.30*	
08-37.1125-102.2619-2-08-						0-C31727-10/05/77-15-			19-14.0-C-	-		7.0-	590-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.80	
08-37.0764-102.2408-2-08-						0-C31729-10/05/77-16-			17-16.0-	-		7.0-	450-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.29	
08-37.0350-102.2078-2-08-						0-C31732-10/05/77-17-			18-17.0-	-		7.0-	620-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.49	
08-37.0956-102.1769-2-08-						0-C31734-10/05/77-18-			16-15.5-	-		6.9-	460-	9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.92	
08-37.0964-102.2200-2-08-						0-C31735-10/05/77-18-			15-13.0-C-	-		7.2-	440-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.37	
08-37.0089-102.2472-2-08-						0-C31736-10/06/77-9-			13-13.5-C-	-		7.0-	500-	24-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.62	
08-37.9567-102.4244-2-08-						0-C31738-09/01/77-9-			24-16.0-C-	-		7.2-	3400-	3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.82	
08-37.9908-102.4406-2-08-						0-C31739-09/01/77-10-			27-16.0-C-	-		8.1-	3740-	5-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22.82	
08-37.9986-102.4572-2-08-						0-C31740-09/01/77-11-			28-16.0-C-	-		7.8-	6000-	19-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
08-37.1350-102.2400-2-08-						0-C31663	48842	-55	-25	-4	66	36987	9	-25	157	-200	17	501	
08-37.1258-102.1556-2-08-						0-C31666	37340	-55	-25	-4	171	45133	18	32	189	-200	20	162	
08-37.1567-102.1306-2-08-						0-C31667	25244	84	40	-4	84	34118	47	33	62	212	16	394	
08-37.2283-102.1314-2-08-						0-C31669	28592	-55	-25	-4	87	45548	5	51	41	203	17	185	
08-37.2069-102.1761-2-08-						0-C31670	24647	58	-25	-4	-25	30129	-3	-25	-25	-200	9	608	
08-37.2367-102.1869-2-08-						0-C31671	27408	-55	-25	-4	-25	38880	-3	-25	-25	-200	9	447	
08-37.2433-102.2189-2-08-						0-C31674	31945	-55	-25	-4	-25	33329	-3	-25	44	-200	17	891	
08-37.1792-102.2394-2-08-						0-C31675	28112	-55	-25	-4	85	33500	8	-25	-25	-200	5	474	
08-37.1781-102.2133-2-08-						0-C31676	21067	-55	-25	-4	103	28198	-3	-25	43	-200	14	234	
08-37.1942-102.1125-2-08-						0-C31678	24119	-55	-25	88	80	34525	4	36	55	-200	22	385	
08-37.1600-102.1039-2-08-						0-C31679	31377	68	-25	-4	173	40625	5	29	58	-200	12	304	
08-37.1689-102.0572-2-08-						0-C31680	24974	-55	-25	14	110	38718	6	-25	200	-200	11	375	
20-37.1547-102.0303-2-08-						0-C31681	28918	60	-25	-4	2486	42548	110	-25	63	-200	9	415	
20-37.1825-102.0111-2-08-						0-C31682	35071	62	-25	-4	2015	56213	94	-25	45	-200	15	215	
20-37.2147-102.0300-2-08-						0-C31683	45704	86	-25	-4	96	67361	-3	35	94	-200	13	449	
20-37.2142-102.0331-2-08-						0-C31684	44571	96	-25	-4	132	65318	13	-25	63	-200	16	548	
08-37.2219-102.0494-2-08-						0-C31686	26282	63	-25	-4	100	39531	6	41	71	-200	10	531	
08-37.2447-102.1211-2-08-						0-C31688	31303	-55	26	-4	213	31350	7	27	105	-200	12	405	
20-37.1122-102.0397-2-08-						0-C31689	31530	59	-25	-4	111	42554	4	-25	64	-200	13	409	
20-37.1011-102.0150-2-08-						0-C31690	61486	83	-25	-4	92	83991	5	27	106	-200	15	427	
20-37.0858-102.0328-2-08-						0-C31692	25741	66	-25	-4	74	33057	4	40	74	-200	18	295	
08-37.0900-102.0622-2-08-						0-C31694	23885	-55	-25	-4	83	32626	4	57	98	-200	14	333	
08-37.0861-102.0769-2-08-						0-C31695	26651	70	-25	-4	46	33529	-3	32	117	-200	19	210	
08-37.0833-102.1125-2-08-						0-C31697	44247	64	43	-4	2532	38313	195	46	165	-200	20	182	
08-37.1128-102.4536-2-08-						0-C31698	41709	-55	-25	-4	110	34951	9	-25	98	-200	21	206	
08-37.1169-102.4039-2-08-						0-C31699	22211	59	-25	-4	54	31293	5	-25	54	-200	10	89	
08-37.0811-102.3950-2-08-						0-C31702	32859	-55	-25	-4	88	34157	4	-25	52	-200	7	96	
08-37.0714-102.4944-2-08-						0-C31703	47801	-55	-25	-4	42	30239	5	-25	73	-200	12	111	
08-37.0481-102.4356-2-08-						0-C31705	53499	73	-25	-4	66	29304	-3	-25	64	-200	13	-50	
08-37.0058-102.4836-2-08-						0-C31706	46835	-55	29	-4	35	22487	5	-25	76	-200	15	124	
08-37.0031-102.4192-2-08-						0-C31707	43898	-55	-25	-4	65	24273	4	-25	75	-200	19	-50	
08-37.0200-102.4117-2-08-						0-C31708	74149	78	-25	-4	189	37718	6	-25	120	-200	24	86	
08-37.0092-102.3814-2-08-						0-C31711	41977	-55	37	-4	106	24101	11	-25	118	-200	15	691	
08-37.0017-102.3597-2-08-						0-C31712	65589	-55	-25	-4	157	28867	6	-25	97	-200	23	-50	
08-37.0325-102.3258-2-08-						0-C31713	44304	61	-25	-4	57	31488	-3	-25	81	-200	13	-50	
08-37.0047-102.2994-2-08-						0-C31714	45630	-55	-25	-4	116	28589	5	-25	76	-200	20	133	
08-37.0650-102.3664-2-08-						0-C31715	29280	-55	-25	-4	299	30092	11	-25	57	-200	13	213	
08-37.0819-102.3528-2-08-						0-C31716	37799	66	28	-4	176	26344	10	54	119	-200	16	105	
08-37.0831-102.3203-2-08-						0-C31717	19896	-55	45	-4	91	20477	5	40	109	-200	17	201	
08-37.1094-102.3519-2-08-						0-C31719	29360	-55	-25	-4	109	30475	4	54	98	-200	13	70	
08-37.0219-102.2753-2-08-						0-C31723	47809	-55	-25	-4	45	36741	-3	-25	79	-200	14	163	
08-37.0606-102.2622-2-08-						0-C31724	40434	-55	-25	-4	63	49090	7	40	98	-200	18	107	
08-37.1125-102.2619-2-08-						0-C31727	39351	74	-25	-4	66	44666	4	36	97	-200	18	-50	
08-37.0764-102.2408-2-08-						0-C31729	42962	60	-25	-4	137	30654	8	40	116	-200	20	108	
08-37.0350-102.2078-2-08-						0-C31732	49704	66	-25	-4	213	53271	4	38	137	-200	22	79	
08-37.0956-102.1769-2-08-						0-C31734	39733	60	-25	-4	110	36998	5	-25	101	-200	16	196	
08-37.0964-102.2200-2-08-						0-C31735	35735	-55	-25	-4	73	42956	5	-25	79	-200	13	77	
08-37.0089-102.2472-2-08-						0-C31736	31679	-55	-25	-4	56	36416	6	59	112	-200	16	-50	
08-37.9567-102.4244-2-08-						0-C31738	176000	197	-25	-4	6542	142000	377	-25	217	-200	45	186	
08-37.9908-102.4406-2-08-						0-C31739	274000	352	345	-4	180	118000	26	619	871	-200	144	193	
08-37.9986-102.4572-2-08-						0-C31740	30403	117	486	5	231	28982	30	651	1034	3526	143	-50	

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																				U CONCENTRATION								
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SCINTILOMETER (uL ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DINC (H) UNITS IN PPB
							DATE	HOUR																										
08-37.9900-102.4953-2-08-						0-C31741-09/01/77-11-			29-16.0-C-				7.4-	6300-	33-	-	-	-	-	-	-	-	-	-4-3-2-1-	-1-1-	-	-	-	-	-	-	-	0.87	
08-37.9622-102.4553-2-08-						0-C31743-09/01/77-12-			30-18.0-				7.8-	1700-	13-	-	-	-	-	-	-	-	-	-1-	-4-2-2-1-	-1-1-	-	-	-	-	-	-	1.91	
08-37.9247-102.4908-2-08-						0-C31745-09/01/77-13-			31-15.0-C-				6.8-	1400-	22-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	-	0.78	
08-37.9161-102.4639-2-08-						0-C31746-09/01/77-13-			29-15.2-				7.0-	920-	11-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-3-1-	6-	-	-	-	-	5.57		
08-37.9253-102.4556-2-08-						0-C31748-09/01/77-14-			29-15.0-C-				7.0-	1500-	19-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	0.44		
08-37.9372-102.4311-2-08-						0-C31749-09/01/77-14-			28-16.8-				6.9-	630-	11-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-3-1-	6-	-	-	-	-	0.27		
08-37.9050-102.4722-2-08-						0-C31750-09/02/77-9-			27-14.0-C-				7.0-	700-	11-	-	-	-	-	-	-	-	-	-1-	-4-3-3-1-	-1-1-	-	-	-	-	-	1.21		
08-37.8800-102.4864-2-08-						0-C31751-09/02/77-9-			28-16.0-C-				6.7-	1230-	16-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-3-1-	-	-	-	-	-	0.06		
08-37.9714-102.3872-2-08-						0-C31752-09/02/77-10-			28-15.2-				6.6-	1100-	11-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-3-1-	6-	-	-	-	-	2.41		
08-37.9564-102.3808-2-08-						0-C31753-09/02/77-11-			30-14.0-C-				6.0-	700-	22-	-	-	-	-	-	-	-	-	-1-	-4-3-3-2-	-1-1-	-	-	-	-	-	0.31		
08-37.9139-102.4186-2-08-						0-C31754-09/02/77-12-			30-	-C-			6.4-	1700-	16-	-	-	-	-	-	-	-	-	-1-	-4-2-2-2-	-1-1-	-	-	-	-	-	26.47*		
08-37.9875-102.3700-2-08-						0-C31756-09/02/77-13-			30-14.0-C-				6.2-	700-	16-	-	-	-	-	-	-	-	-	-1-	-4-3-1-3-	-1-1-	-	-	-	-	-	4.48		
08-37.9394-102.3750-2-08-						0-C31758-09/02/77-14-			28-16.5-C-				7.0-	750-	11-	-	-	-	-	-	-	-	-	-	-4-3-2-2-	-3-3-	-	-	-	-	-	0.51		
08-37.9319-102.3369-2-08-						0-C31759-09/02/77-13-			29-16.0-C-				7.0-	1300-	22-	-	-	-	-	-	-	-	-	-1-	-4-3-2-3-	-1-1-	-	-	-	-	-	12.29		
08-37.9122-102.3400-2-08-						0-C31760-09/02/77-15-			29-18.0-C-				7.0-	900-	-	-	-	-	-	-	-	-	-	-	-4-3-2-2-	-3-2-	-	-	-	-	-	0.26		
08-37.8892-102.2797-2-08-						0-C31762-09/02/77-16-			28-16.0-C-				6.6-	900-	22-	-	-	-	-	-	-	-	-	-1-	-4-3-3-2-	-1-1-	-	-	-	-	-	0.26		
08-37.9250-102.2556-2-08-						0-C31764-09/02/77-16-			29-18.0-C-				6.4-	1000-	27-	-	-	-	-	-	-	-	-	-1-	-4-3-2-3-	-1-3-	-	-	-	-	-	0.34		
08-37.8836-102.3008-2-08-						0-C31766-09/03/77-8-			23-14.5-				7.2-	700-	16-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	31.50*		
08-37.9553-102.3153-2-08-						0-C31767-09/03/77-9-			28-14.5-				7.0-	800-	11-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-3-1-	6-300-	-	-	-	-	0.14		
08-37.9492-102.3219-2-08-						0-C31768-09/03/77-9-			25-15.0-C-				7.0-	2100-	25-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-1-1-	6-20-	-	-	-	-	9.96		
08-37.9647-102.3000-2-08-						0-C31769-09/03/77-9-			27-17.0-C-				7.2-	900-	11-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-1-3-	-	-	-	-	-	0.27		
08-37.9992-102.3047-2-08-						0-C31770-09/03/77-10-			29-25.0-C-				7.0-	750-	11-	-	-	-	-	-	-	-	-	-1-	-4-3-1-2-	-3-3-	6-	-	-	-	-	0.18		
08-37.9819-102.2389-2-08-						0-C31771-09/03/77-10-			28-	-C-			7.2-	2900-	16-	-	-	-	-	-	-	-	-	-1-	-4-3-1-2-	-1-1-	-	-	-	-	-	8.72		
08-37.9250-102.2419-2-08-						0-C31772-09/03/77-11-			29-17.0-C-				7.0-	1000-	27-	-	-	-	-	-	-	-	-	-1-	-4-3-1-2-	-3-3-	-	-	-	-	-	0.35		
08-37.9306-102.1947-2-08-						0-C31773-09/03/77-11-			30-15.0-				7.0-	1250-	5-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-3-2-	-	-	-	-	-	5.74		
08-37.9181-102.2017-2-08-						0-C31774-09/03/77-13-			30-16.3-C-				7.2-	1300-	11-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-3-1-	-	-	-	-	-	2.04		
08-37.8994-102.2450-2-08-						0-C31775-09/03/77-14-			31-15.5-C-				7.2-	800-	5-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	2.96		
08-37.8772-102.2433-2-08-						0-C31777-09/03/77-14-			32-16.0-C-				7.2-	1100-	25-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	6.30		
08-37.8886-102.2186-2-08-						0-C31778-09/03/77-15-			32-16.0-C-				7.0-	900-	22-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	4.17		
08-37.9003-102.1661-2-08-						0-C31780-09/03/77-16-			32-16.0-C-				7.0-	390-	13-	-	-	-	-	-	-	-	-	-2-	-4-3-2-2-	-1-1-	-	-	-	-	-	0.70		
08-37.9333-102.1733-2-08-						0-C31781-09/03/77-18-			31-15.3-				7.7-	680-	11-	-	-	-	-	-	-	-	-	-	-4-3-2-2-	-1-	-	-	-	-	-	5.44		
08-37.9558-102.1831-2-08-						0-C31782-09/04/77-9-			26-16.0-C-				7.2-	700-	13-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	4.04		
08-37.9717-102.1417-2-08-						0-C31783-09/04/77-10-			29-17.0-				7.3-	520-	5-	-	-	-	-	-	-	-	-	-1-	-3-3-2-2-	-1-	-	-	-	-	-	2.46		
08-37.9625-102.1258-2-08-						0-C31784-09/04/77-11-			28-19.0-C-				7.1-	700-	25-	-	-	-	-	-	-	-	-	-1-	-4-3-1-2-	-1-6-	-	-	-	-	-	0.31		
08-37.9400-102.1361-2-08-						0-C31785-09/04/77-11-			29-	-			6.9-	720-	11-	-	-	-	-	-	-	-	-	-	-4-3-2-2-	-4-	-	-	-	-	-	0.23		
08-37.8972-102.1289-2-08-						0-C31786-09/04/77-11-			30-	-C-			7.0-	600-	16-	-	-	-	-	-	-	-	-	-1-	-4-3-	-2-	-1-3-	-	-	-	-	2.78		
08-37.8764-102.1608-2-08-						0-C31787-09/04/77-12-			31-18.0-C-				7.0-	550-	11-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	6.17		
08-37.8822-102.1119-2-08-						0-C31788-09/04/77-13-			31-18.0-C-				7.0-	550-	22-	-	-	-	-	-	-	-	-	-1-	-4-3-1-2-	-1-6-	-	-	-	-	-	12.69		
08-37.9756-102.1175-2-08-						0-C31789-09/04/77-13-			31-18.0-				6.9-	700-	8-	-	-	-	-	-	-	-	-	-	-4-3-1-2-	-2-	-	-	-	-	-	0.44		
08-37.8983-102.1147-2-08-						0-C31790-09/05/77-9-			25-18.0-C-				7.0-	700-	27-	-	-	-	-	-	-	-	-	-1-	-7-3-1-3-	-1-3-	-	-	-	-	-	3.13		
08-37.8881-102.0786-2-08-						0-C31791-09/05/77-10-			25-21.3-				7.2-	1020-	11-	-	-	-	-	-	-	-	-	-	-4-3-1-3-	-2-	-	-	-	-	-	12.69		
08-37.9214-102.0500-2-08-						0-C31792-09/05/77-10-			25-19.5-C-				7.0-	800-	19-	-	-	-	-	-	-	-	-	-1-	-4-3-1-3-	-1-1-	-	-	-	-	-	0.18		
20-37.9056-102.0411-2-08-						0-C31793-09/04/77-10-			26-20.0-				6.9-	900-	11-	-	-	-	-	-	-	-	-	-	-4-3-1-3-	-1-	-	-	-	-	-	2.46		
20-37.9600-102.0072-2-08-						0-C31794-09/04/77-11-			26-25.0-				6.1-	1200-	2-	-	-	-	-	-	-	-	-	-	-4-3-2-3-	-1-	-	-	-	-	-	0.26		
20-37.9614-102.0342-2-08-						0-C31795-09/05/77-12-			27-25.0-C-				6.8-	2200-	16-	-	-	-	-	-	-	-	-	-1-	-4-3-2-3-	-1-1-	-	-	-	-	-	67.80*		
20-37.9828-102.0414-2-08-						0-C31796-09/05/77-13-			30-25.0-C-				6.6-	550-	5-	-	-	-	-	-	-	-	-	-2-	-3-3-2-2-	-1-1-	-	-	-	-	-	0.51		
08-37.9911-102.0653-2-08-						0-C31797-09/04/77-14-			30-23.3-				6.6-	630-	11-	-	-	-	-	-	-	-	-	-	-4-3-2-2-	-1-	-	-	-	-	-	3.90		
08-37.9797-102.0742-2-08-						0-C31798-09/04/77-15-			16.0-				7.3-	730-	11-	-	-	-	-	-	-	-	-	-	-4-3-2-2-	-6-	-	-	-	-	-	1.93		
08-37.9533-102.0444-2-08-						0-C31799-09/05/77-15-			32-27.0-C-				7.2-	1900-	22-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	4.56		
08-37.9428-102.0508-2-08-						0-C31800-09/05/77-16-			31-	-C-			6.6-	1350-	13-	-	-	-	-	-	-	-	-	-1-	-4-3-2-2-	-1-1-	-	-	-	-	-	7.10		
08-37.9414-102.1100-2-08-						0-C31802-09/05/77-16-			30-	-C-			7.0-	600-	19-	-	-	-	-	-	-	-	-	-1-	-4-3-1-2-	-1-3-	6-300-265-	-	-	-	-	3.69		

②

69

DOE SAMPLE NUMBER					LASL SAMPLE LOCATION NUMBER AND FIELD DATA																					U CONCENTRATION								
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SCINTILLOMETER (uL ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATERS FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (H) UNITS IN PPB
							DATE	HOUR																										
20-37.8697-102.0389-2-08-						0-C31803-09/06/77-9-			28-19.0-C-		6.8-		600-	22-	-	-	-	-	-1-	-7-4-2-2-	-1-3-	-	-	-	-	-	-	-	-	-	-	-	4.04	
20-37.8531-102.0083-2-08-						0-C31805-09/06/77-10-			30-17.0-C-		6.6-		900-	16-	-	-	-	-	-1-	-7-4-1-1-	-1-6-	-	-	-	-	-	-	-	-	-	-	-	5.79	
08-37.8442-102.0431-2-08-						0-C31806-09/06/77-10-			29-25.0-		7.0-		530-	8-	-	-	-	-	-	-4-3-2-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	3.22	
08-37.8247-102.0950-2-08-						0-C31807-09/06/77-10-			30-19.0-C-		7.0-		470-	19-	-	-	-	-	-1-	-7-4-1-1-	-1-3-	-	-	-	-	-	-	-	-	-	-	-	3.30	
08-37.7744-102.0525-2-08-						0-C31809-09/06/77-11-			30-18.0-		7.1-		550-	16-	-	-	-	-	-1-	-4-3-2-1-	-6-	-	-	-	-	-	-	-	-	-	-	-	4.00	
08-37.8125-102.0717-2-08-						0-C31811-09/06/77-12-			31-21.0-		6.8-		470-	16-	-	-	-	-	-	-4-3-2-1-	-5-	-	-	-	-	-	-	-	-	-	-	-	3.13	
08-37.8139-102.0442-2-08-						0-C31812-09/06/77-12-			31-16.5-C-		7.0-		550-	16-	-	-	-	-	-1-	-7-4-1-1-	-1-6-	-	-	-	-	-	-	-	-	-	-	-	2.96	
08-37.7219-102.0922-2-08-						0-C31813-09/06/77-13-			31-19.5-C-		7.8-		460-	19-	-	-	-	-	-1-	-4-3-1-1-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	1.31	
08-37.7403-102.0911-2-08-						0-C31814-09/06/77-13-			31-22.5-		7.3-		560-	11-	-	-	-	-	-1-	-4-3-2-2-	-5-	-	-	-	-	-	-	-	-	-	-	-	4.56	
08-37.6983-102.1008-2-08-						0-C31815-09/06/77-14-			31-21.2-C-		7.0-		360-	22-	-	-	-	-	-1-	-4-3-1-1-	-9-1-	-	-	-	-	-	-	-	-	-	-	-	1.36	
20-37.6878-102.0364-2-08-						0-C31816-09/06/77-14-			32-18.3-		7.5-		460-	22-	-	-	-	-	-	-4-3-2-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	3.60	
08-37.7106-102.0639-2-08-						0-C31817-09/06/77-15-			32-25.0-C-		7.6-		430-	16-	-	-	-	-	-5-	-4-3-1-1-	-3-3-	-	-	-	-	-	-	-	-	-	-	-	2.72	
20-37.6644-102.0167-2-08-						0-C31819-09/07/77-10-			29-19.3-C-		7.6-		600-	19-	-	-	-	-	-1-	-4-3-1-1-	-1-3-	-	-	-	-	-	-	-	-	-	-	-	4.88	
20-37.6422-102.0344-2-08-						0-C31820-09/07/77-10-			27-17.0-		6.9-		560-	11-	-	-	-	-	-1-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	7.76	
08-37.6561-102.0750-2-08-						0-C31821-09/07/77-10-			27-25.0-C-		7.0-		550-	16-	-	-	-	-	-1-	-4-3-1-1-	-1-3-	6-	90-	-	-	-	-	-	-	-	-	-	11.99	
08-37.6525-102.1011-2-08-						0-C31822-09/07/77-11-			29-19.0-C-		7.0-		550-	22-	-	-	-	-	-1-	-4-3-1-1-	-3-1-	6-	100-	-	-	-	-	-	-	-	-	-	4.25	
08-37.6150-102.0622-2-08-						0-C31824-09/07/77-12-			30-16.0-C-		7.0-		525-	22-	-	-	-	-	-1-	-4-3-1-1-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	5.58	
08-37.5728-102.0556-2-08-						0-C31825-09/07/77-12-			31-19.0-		6.9-		600-	-	-	-	-	-	-1-	-4-3-1-1-	-5-	-	-	-	-	-	-	-	-	-	-	-	8.41	
20-37.5936-102.0167-2-08-						0-C31826-09/07/77-13-			31-		7.2-		600-	11-	-	-	-	-	-1-	-4-3-1-1-	-2-	-	-	-	-	-	-	-	-	-	-	-	4.92	
20-37.5783-102.0408-2-08-						0-C31827-09/07/77-13-			30-19.0-C-		6.8-		700-	13-	-	-	-	-	-1-	-4-3-1-1-	-1-4-	-	-	-	-	-	-	-	-	-	-	-	4.33	
08-37.5594-102.0547-2-08-						0-C31828-09/07/77-14-			31-15.0-		6.8-		700-	22-	-	-	-	-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	9.13	
08-37.5286-102.1131-2-08-						0-C31829-09/07/77-14-			31-21.0-C-		7.0-		900-	13-	-	-	-	-	-1-	-4-3-2-1-	-1-5-	-	-	-	-	-	-	-	-	-	-	-	7.61	
08-37.5417-102.0419-2-08-						0-C31830-09/07/77-15-			31-14.0-C-		6.9-		630-	16-	-	-	-	-	-	-3-	-4-3-2-1-	-	-	-	-	-	-	-	-	-	-	-	2.10	
20-37.5178-102.0364-2-06-						0-C31831-09/07/77-15-			31-24.0-C-		7.0-		300-	0-	-	-4-6-1-2-4-	-	-	-	-4-3-2-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	0.20	
20-37.5353-102.0069-2-08-						0-C31832-09/07/77-16-			29-16.1-		6.6-		870-	16-	-	-	-	-	-	-4-3-1-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	62.20	

APPENDIX I-A. (continued). Elemental Concentrations for Water Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY PLASMA-SOURCE EMISSION SPECTROGRAPHY													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per billion (ppb)												
							Ca	Co	Cr	Cu	Fe	Mg	Mn	Mo	Ni	Pb	Ti	Zn	
20-37.8697-102.0389-2-08-			0-C31803			91918	172	53	-4	314	31234	30	-25	60	-200	32	492		
20-37.8531-102.0083-2-08-			0-C31805			107000	166	-25	-4	114	52839	77	-25	80	-200	40	278		
08-37.8442-102.0431-2-08-			0-C31806			64643	62	57	-4	182	22233	18	-25	102	-200	16	1329		
08-37.8247-102.0950-2-08-			0-C31807			55947	-55	30	-4	50	17882	11	-25	88	-200	12	337		
08-37.7744-102.0525-2-08-			0-C31809			66671	61	67	-4	35	20643	5	-25	131	-200	21	-50		
08-37.8125-102.0717-2-08-			0-C31811			53475	-55	68	-4	46	15607	-3	30	89	-200	21	726		
08-37.8139-102.0442-2-08-			0-C31812			69381	68	95	-4	35	21159	-3	-25	159	-200	24	-50		
08-37.7219-102.0922-2-08-			0-C31813			42464	-55	60	-4	2600	15708	78	32	99	-200	14	376		
08-37.7403-102.0911-2-08-			0-C31814			67224	-55	98	-4	58	22629	4	57	145	-200	26	364		
08-37.6983-102.1008-2-08-			0-C31815			29252	57	76	-4	45	13458	24	64	124	-200	16	-50		
20-37.6878-102.0364-2-08-			0-C31816			49837	62	73	-4	36	17581	-3	46	112	-200	18	145		
08-37.7106-102.0639-2-08-			0-C31817			40323	-55	71	-4	-25	20467	-3	170	129	-200	21	90		
20-37.6644-102.0167-2-08-			0-C31819			50702	-55	75	-4	26	19099	-3	166	145	-200	22	137		
20-37.6422-102.0344-2-08-			0-C31820			77927	75	73	-4	78	23131	6	-25	119	-200	21	206		
08-37.6561-102.0750-2-08-			0-C31821			52211	-55	90	-4	34	20318	17	34	140	-200	24	504		
08-37.6525-102.1011-2-08-			0-C31822			48907	-55	77	-4	147	17729	26	48	111	-200	19	1558		
08-37.6150-102.0622-2-08-			0-C31824			55545	75	83	-4	73	24412	7	32	151	-200	17	87		
08-37.5728-102.0556-2-08-			0-C31825			35329	-55	94	-4	58	26695	6	90	183	-200	24	248		
20-37.5936-102.0167-2-08-			0-C31826			39069	-55	-25	-4	66	24159	14	-25	43	-200	10	351		
20-37.5783-102.0408-2-08-			0-C31827			52934	69	-25	-4	58	38478	12	-25	-25	-200	9	190		
08-37.5594-102.0547-2-08-			0-C31828			92122	82	50	-4	77	31963	-3	-25	122	-200	21	138		
08-37.5286-102.1131-2-08-			0-C31829			64667	73	29	-4	-25	27142	-3	167	104	-200	8	-50		
08-37.5417-102.0419-2-08-			0-C31830			97475	123	90	-4	62	15408	74	-25	156	-200	17	1314		
20-37.5178-102.0364-2-06-			0-C31831			39831	59	34	-4	427	6569	119	-25	71	-200	16	-50		
20-37.5353-102.0069-2-08-			0-C31832			53654	110	-25	-4	137	59098	10	-25	63	-200	6	395		

APPENDIX I-B

Listings of Field Data and Elemental Concentrations for Sediment Samples from the La Junta Quadrangle, Colorado (Pages 74 through 125)

Note that four pages, numbered ① through ④ in the upper right hand corner, are necessary to provide the complete data listing for each numerically ordered sequence of samples.

- ① - Lists field data and uranium concentrations determined by delayed-neutron counting.
- ② - Lists concentrations of 11 elements determined by x-ray fluorescence and arc-source emission spectrography.
- ③ and ④ - List concentrations of 31 elements determined by neutron activation analysis and computed U/Th ratios.

(See Appendix III for Codes to Listings)

APPENDIX I-B.

Elemental Concentrations for Sediment Samples

①

[illegible]

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE										ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)										Concentrations in weight ppm
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li
08-37.8067-102.2411-2-11-			0-C30004													-1	6
08-37.8683-102.2236-2-15-			0-C30009													2	29
08-37.8681-102.2086-2-15-			0-C30010				-5	-5	-5	-10	-20	-15	15	-10	-15	1	29
08-37.7789-102.3650-2-15-			0-C30020				-5	-5	-5	-10	-20	-15	21	-10	-15	2	24
08-37.9056-103.5197-2-12-			0-C30052				-5	-5	-5	16	-20	-15	8	-10	24	1	20
08-37.9556-103.4658-2-15-			0-C30054				-5	-5	-5	21	-20	19	-5	-10	-15	-1	15
08-37.9819-103.4233-2-15-			0-C30055				-5	5	-5	21	-20	20	12	-10	-15	1	17
08-37.9289-103.4994-2-11-			0-C30058				-5	-5	-5	25	-20	23	10	-10	-15	1	16
08-37.9272-103.4889-2-15-			0-C30059				-5	-5	-5	10	-20	-15	10	-10	-15	-1	20
08-37.9111-103.3767-2-15-			0-C30062				-5	-5	-5	23	-20	-15	6	-10	-15	1	17
08-37.9528-103.3139-2-15-			0-C30068				-5	-5	-5	16	-20	16	-5	-10	-15	-1	19
08-37.9228-103.2619-2-12-			0-C30070				-5	-5	-5	16	-20	-15	14	-10	-15	1	20
08-37.9000-103.2942-2-11-			0-C30071				-5	-5	-5	11	-20	-15	-5	-10	16	-1	10
08-37.8981-103.3358-2-15-			0-C30072				-5	-5	-5	14	-20	-15	8	-10	-15	-1	16
08-37.8811-103.3356-2-15-			0-C30074				-5	-5	-5	19	-20	-15	7	-10	-15	2	24
08-37.9847-103.3158-2-15-			0-C30075				-5	-5	-5	19	-20	-15	11	-10	-15	1	19
08-37.9725-103.1692-2-15-			0-C30081				-5	-5	-5	10	-20	-15	17	-10	-15	2	22
08-37.9494-103.0011-2-15-			0-C30094				-5	-5	-5	22	-20	18	11	-10	-15	1	20
08-37.9103-103.1106-2-15-			0-C30104				-5	-5	-5	-10	-20	-15	5	-10	-15	1	15
08-37.7939-103.8942-2-15-			0-C30110				-5	-5	-5	19	-20	-15	18	-10	17	1	18
08-37.8050-103.9497-2-15-			0-C30111				-5	-5	-5	11	-20	-15	16	-10	-15	2	20
08-37.7761-103.9861-2-11-			0-C30112				-5	-5	-5	28	-20	-15	-5	-10	-15	2	23
08-37.8686-103.8225-2-15-			0-C30117				-5	-5	-5	21	-20	-15	21	-10	15	2	24
08-37.8706-103.8047-2-15-			0-C30120				-5	-5	-5	-10	-20	17	8	-10	-15	1	19
08-37.8086-103.7878-2-15-			0-C30121				-5	-5	-5	17	-20	15	10	-10	-15	1	20
08-37.7533-103.8011-2-11-			0-C30122				-5	-5	-5	-10	-20	-15	8	-10	-15	1	19
08-37.7619-103.6747-2-12-			0-C30124				-5	-5	-5	22	-20	-15	10	-10	-15	2	25
08-37.8500-103.6978-2-15-			0-C30128				-5	-5	-5	19	-20	15	6	-10	-15	2	28
08-37.8303-103.6878-2-15-			0-C30130				-5	-5	-5	30	-20	-15	15	-10	-15	1	20
08-37.8322-103.6850-2-12-			0-C30131				-5	-5	-5	10	-20	-15	14	-10	-15	2	21
08-37.7897-103.7181-2-12-			0-C30134				-5	-5	-5	17	-20	-15	6	-10	-15	1	22
08-37.7853-103.6614-2-12-			0-C30135				-5	-5	-5	11	-20	-15	10	-10	-15	1	30
08-37.8533-103.6453-2-12-			0-C30137				-5	-5	-5	18	-20	-15	17	-10	-15	1	21
08-37.8281-103.5853-2-15-			0-C30138				-5	-5	-5	-10	-20	-15	11	-10	-15	1	44
08-37.8031-103.6022-2-12-			0-C30140				-5	-5	-5	16	-20	-15	12	-10	-15	1	16
08-37.7658-103.5389-2-12-			0-C30145				-5	-5	-5	21	-20	-15	-5	-10	-15	1	22
08-37.7608-103.5144-2-11-			0-C30147				-5	-5	-5	27	-20	-15	17	-10	-15	1	25
08-37.8369-103.5636-2-15-			0-C30152				-5	-5	-5	16	-20	-15	16	-10	-15	1	24
08-37.7842-103.4856-2-11-			0-C30153				-5	-5	-5	32	-20	-15	20	-10	-15	1	26
08-37.7814-103.4394-2-11-			0-C30159				-5	-5	-5	-10	-20	-15	5	-10	-15	-1	4
08-37.8097-103.4192-2-15-			0-C30161				-5	-5	-5	26	-20	-15	13	-10	-15	1	14
08-37.8514-103.3986-2-15-			0-C30165				-5	-5	-5	18	-20	-15	-5	-10	37	1	18
08-37.8300-103.4497-2-12-			0-C30167				-5	-5	-5	20	-20	26	-5	-10	-15	1	12
08-37.8669-103.3267-2-11-			0-C30170				-5	-5	-5	-10	-20	-15	-5	-10	-15	1	18
08-37.8386-103.3386-2-11-			0-C30171				-5	-5	-5	11	-20	-15	18	-10	-15	1	13
08-37.8214-103.3133-2-12-			0-C30175				-5	-5	-5	16	-20	-15	8	-10	-15	1	17
08-37.8108-103.2961-2-11-			0-C30176				-5	-5	-5	20	-20	-15	15	-10	-15	1	24
08-37.7981-103.3083-2-11-			0-C30177				-5	-5	-5	13	-20	-15	10	-10	-15	1	19
08-37.7631-103.2594-2-15-			0-C30180				-5	-5	-5	19	-20	-15	9	-10	-15	2	23
08-37.7661-103.3708-2-11-			0-C30185				-5	-5	-5	16	-20	-15	9	-10	-15	-1	16
08-37.8089-103.3631-2-15-			0-C30186				-5	-5	-5	24	-20	-15	15	-10	-15	1	19

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS																
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu
08-37.8067-102.2411-2-11-						0-C30004	28150	-0.13	796	70300	116	-116	12.3	126	-2.1	7	1.5	63000	46.0	10840	76	1.5
08-37.8683-102.2236-2-15-						0-C30009	51750	-0.10	691	23210	70	-84	8.3	43	2.6	5	1.1	18530	10.2	21290	46	0.4
08-37.8681-102.2086-2-15-						0-C30010	62320	-0.09	755	29990	74	-71	10.5	46	3.1	5	1.1	17850	9.0	19480	44	0.4
08-37.7789-102.3650-2-15-						0-C30020	51350	-0.07	767	44020	98	-70	7.0	46	2.5	6	1.2	22830	17.7	19960	55	0.6
08-37.9056-103.5197-2-12-						0-C30052	56510	-0.06	703	81530	77	-77	7.7	46	2.5	5	0.9	14760	9.9	17200	37	0.6
08-37.9556-103.4658-2-15-						0-C30054	53150	-0.08	1170	146300	54	-70	8.5	43	3.4	3	1.0	20850	4.5	12030	31	0.4
08-37.9819-103.4233-2-15-						0-C30055	53990	-0.06	512	111300	66	-69	7.7	40	3.4	5	1.0	16190	9.4	15860	40	0.5
08-37.9289-103.4994-2-11-						0-C30058	56000	-0.07	479	98380	68	-79	8.1	45	3.3	4	1.2	15380	6.6	15890	32	0.4
08-37.9272-103.4889-2-15-						0-C30059	52060	-0.07	673	111400	56	-78	7.4	38	3.6	3	1.0	15730	7.5	15100	38	0.3
08-37.9111-103.3767-2-15-						0-C30062	54670	-0.05	582	91090	60	-68	8.1	37	2.5	5	1.0	14270	7.1	19470	38	0.4
08-37.9528-103.3139-2-15-						0-C30068	52190	-0.06	560	104600	64	-74	7.4	35	2.7	5	1.0	15300	10.2	16680	40	0.4
08-37.9228-103.2619-2-12-						0-C30070	57830	-0.06	528	15810	88	-80	8.5	41	2.6	5	1.1	16250	13.6	16140	45	0.6
08-37.9000-103.2942-2-11-						0-C30071	35570	-0.05	359	5343	51	-51	5.5	26	1.7	3	0.9	9643	17.0	8694	30	0.5
08-37.8981-103.3358-2-15-						0-C30072	58530	-0.05	542	92120	63	-70	8.9	51	3.4	4	1.1	15450	7.9	18510	41	0.4
08-37.8811-103.3356-2-15-						0-C30074	55610	-0.06	564	37950	72	-67	7.8	37	2.8	5	1.0	15380	10.2	15850	40	0.4
08-37.9847-103.3158-2-15-						0-C30075	54680	-0.06	505	93760	62	-75	7.2	40	2.9	4	1.0	13530	7.7	16930	42	0.4
08-37.9725-103.1692-2-15-						0-C30081	66930	-0.06	671	19080	80	-76	9.8	40	2.8	6	1.2	18040	12.5	22220	46	0.6
08-37.9494-103.0011-2-15-						0-C30094	54110	-0.06	671	34160	78	-69	7.8	47	2.9	5	1.0	14440	12.4	14580	38	0.6
08-37.9103-103.1106-2-15-						0-C30104	36980	-0.04	552	16740	44	-57	5.7	20	2.3	3	0.8	8806	8.1	12420	17	0.3
08-37.7939-103.8942-2-15-						0-C30110	63890	-0.04	735	36160	62	-79	8.4	36	3.0	5	1.0	14900	8.2	21040	22	0.4
08-37.8050-103.9497-2-15-						0-C30111	63320	-0.06	674	57090	64	-76	8.0	30	3.4	5	1.0	16300	7.9	22270	38	0.4
08-37.7761-103.9861-2-11-						0-C30112	63490	-0.07	784	73710	73	-77	8.7	41	3.5	5	1.0	16300	8.6	19290	34	0.5
08-37.8686-103.8225-2-15-						0-C30117	62380	-0.09	482	76280	74	-93	9.6	41	4.8	4	1.2	18520	7.0	17460	42	0.6
08-37.8706-103.8047-2-15-						0-C30120	62230	-0.05	642	64340	65	-76	8.2	37	3.4	5	1.1	16210	9.3	19420	37	0.5
08-37.8086-103.7878-2-15-						0-C30121	61130	-0.06	620	80550	67	-70	8.6	36	3.3	5	1.0	16120	7.0	17210	38	0.4
08-37.7533-103.8011-2-11-						0-C30122	56470	-0.07	558	98990	75	197	9.0	42	2.8	5	1.3	16540	8.1	15400	37	0.4
08-37.7619-103.6747-2-12-						0-C30124	63560	-0.08	586	47190	71	-89	8.4	49	4.2	4	1.1	16960	7.5	19110	50	0.5
08-37.8500-103.6978-2-15-						0-C30128	67990	-0.06	669	51190	81	-78	10.2	36	2.8	6	1.1	18560	8.7	20610	43	
08-37.8303-103.6878-2-15-						0-C30130	63050	-0.05	768	48710	68	-79	8.2	41	2.8	5	1.1	15400	8.4	20450	38	0.5
08-37.8322-103.6850-2-12-						0-C30131	60750	-0.06	713	44980	75	-86	7.7	42	2.9	5	1.1	14050	10.9	18840	40	0.5
08-37.7897-103.7181-2-12-						0-C30134	54820	-0.08	471	95050	67	-98	9.2	38	3.5	4	0.9	16350	4.8	16960	37	0.3
08-37.7853-103.6614-2-12-						0-C30135	65240	-0.06	550	59480	66	-69	9.5	44	3.6	5	0.9	18250	9.0	18090	42	0.5
08-37.8533-103.6453-2-12-						0-C30137	62490	-0.07	735	57370	79	-84	9.7	48	3.1	5	1.1	17550	9.6	18750	47	0.5
08-37.8281-103.5853-2-15-						0-C30138	64090	-0.05	643	47340	63	-82	7.8	34	2.9	4	1.0	14030	7.8	19850	38	0.5
08-37.8031-103.6022-2-12-						0-C30140	57850	-0.08	554	56350	77	-98	8.6	34	-1.7	4	1.0	15410	9.2	18950	44	0.4
08-37.7658-103.5389-2-12-						0-C30145	56160	-0.05	603	92670	63	-72	8.3	37	2.8	5	1.0	15410	8.7	17360	33	0.5
08-37.7608-103.5144-2-11-						0-C30147	63590	-0.06	611	43490	76	-77	8.5	33	3.8	5	1.0	15900	6.9	19840	40	0.1
08-37.8369-103.5636-2-15-						0-C30152	55350	-0.07	523	60090	77	-74	7.3	48	3.0	5	0.9	13240	10.8	13540	39	0.4
08-37.7842-103.4856-2-11-						0-C30153	57460	-0.09	601	60610	64	-92	8.8	40	3.8	4	0.9	16480	7.4	15080	33	0.5
08-37.7814-103.4394-2-11-						0-C30159	19650	-0.03	117	2095	37	-24	4.4	31	1.2	3	0.6	3891	17.2	3063	22	0.3
08-37.8097-103.4192-2-15-						0-C30161	48990	-0.05	560	48910	66	64	6.7	33	2.3	5	1.1	13520	14.8	14490	41	0.5
08-37.8514-103.3986-2-15-						0-C30165	52730	-0.06	576	93860	73	-73	7.7	38	2.6	4	1.0	14390	9.3	14320	40	0.4
08-37.8300-103.4497-2-12-						0-C30167	48890	-0.07	562	131500	52	-79	7.3	37	2.5	3	0.8	12740	6.5	12220	32	0.4
08-37.8669-103.3267-2-11-						0-C30170	47130	-0.05	463	10290	70	-58	8.4	37	2.5	5	1.0	12070	11.5	13400	37	0.6
08-37.8386-103.3386-2-11-						0-C30171	42460	-0.07	240	7227	65	-53	6.5	45	1.9	5	0.9	9742	13.2	8435	37	0.6
08-37.8214-103.3133-2-12-						0-C30175	48130	-0.07	461	74830	67	-72	11.1	31	2.7	5	0.9	12070	10.7	11500	39	0.5
08-37.8108-103.2961-2-11-						0-C30176	52660	-0.07	429	14840	92	-56	7.5	51	2.7	7	1.3	7944	19.8	11980	44	0.7
08-37.7981-103.3083-2-11-						0-C30177	43030	-0.07	564	10590	72	-65	6.4	26	2.3	4	0.9	12600	13.5	12660	33	0.5
08-37.7631-103.2594-2-15-						0-C30180	49290	-0.05	521	15030	64	-57	7.5	36	2.3	4	0.9	12480	10.3	15130	37	0.5
08-37.7661-103.3708-2-11-						0-C30185	30400	-0.04	382	11810	34	-40	4.9	21	1.9	3	0.7	7145	8.8	14350	21	0.3
08-37.8089-103.3631-2-15-						0-C30186	47350	-0.07	441	11050	60	-63	6.3	32	2.7	4	0.9	11070	9.0	13200	30	0.4

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

4

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS (continued)																U/Th RATIO	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)																
							Mg	Mn	Na	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	Ti	V	Yb	Zn		
08-37.8067-102.2411-2-11-						0-C30004	-5500	1812	5659	-36	-4	11.2	9.6	-585	2	-1	21.1	15600	168	10.6	95	0.361	
08-37.8683-102.2236-2-15-						0-C30009	14790	425	9829	-30	-3	7.6	5.1	-306	-1	-1	11.0	3166	76	5.7	65	0.283	
08-37.8681-102.2086-2-15-						0-C30010	13260	417	9489	50	-2	7.6	5.3	-262	1	1	12.5	3485	81	3.9	94	0.260	
08-37.7789-102.3650-2-15-						0-C30020	8949	523	10110	47	-2	7.1	6.5	-250	1	-1	15.8	6001	94	4.7	-69	0.315	
08-37.9056-103.5197-2-12-						0-C30052	13110	417	7467	32	-2	6.6	5.7	630	-1	-1	12.2	2824	77	3.6	88	0.311	
08-37.9556-103.4658-2-15-						0-C30054	14020	286	3428	-27	-2	7.4	4.7	967	-1		9.7	2295	105	-1.6	78	0.598	
08-37.9319-103.4233-2-15-						0-C30055	12230	318	7015	42	-2	7.3	5.9	834	-1	-1	11.0	3079	92	2.5	113	0.700	
08-37.9289-103.4994-2-11-						0-C30058	13540	343	6202	47	-2	7.2	4.9	-293	-1	-1	10.9	2853	94	4.6	-10	0.450	
08-37.9272-103.4889-2-15-						0-C30059	11010	422	5690	-26	-2	7.2	4.2	642	-1	-1	9.9	2442	86	4.0	-82	0.424	
08-37.9111-103.3767-2-15-						0-C30062	12100	368	7994	33	-2	6.5	4.1	505	-1		10.9	2744	75	3.0	70	0.358	
08-37.9528-103.3139-2-15-						0-C30068	12200	375	8909	49	-2	6.6	5.1	678	-1	-1	10.6	3421	77	2.9	57	0.443	
08-37.9228-103.2619-2-12-						0-C30070	9804	438	8756	46	-2	7.0	5.8	-298	-1	1	14.0	3329	67	5.3	103	0.279	
08-37.9000-103.2942-2-11-						0-C30071	3968	244	4260	-19	-2	4.9	3.8	-210	-1	-1	9.6	2897	46	3.8	-75	0.354	
08-37.8981-103.3358-2-15-						0-C30072	13970	395	7324	35	-2	7.2	5.3	531	-1	-1	11.0	3587	87	3.1	-76	0.436	
08-37.8811-103.3356-2-15-						0-C30074	11850	389	9033	36	-2	6.9	5.1	453	-1	-1	11.6	3119	73	4.6	98	0.310	
08-37.9847-103.3158-2-15-						0-C30075	12590	298	6801	36	-2	6.5	4.0	543	-1	-1	10.3	3287	84	2.7	84	0.408	
08-37.9725-103.1692-2-15-						0-C30081	11730	501	10940	53	-2	7.7	6.2	-285	-1	-1	13.1	4035	84	4.4	67	0.298	
08-37.9494-103.0011-2-15-						0-C30094	10220	345	6927	41	-2	6.7	5.4	-260	-1		12.5	3385	72	4.3	76	0.328	
08-37.9103-103.1106-2-15-						0-C30104	9323	241	5474	-17	-1	4.6	2.0	-217	-1		6.6	2388	40	2.5	-68	0.409	
08-37.7939-103.8942-2-15-						0-C30110	13340	447	12300	46	-1	7.0	3.4	360	-1	-1	10.4	3097	79	3.1	83	0.288	
08-37.8050-103.9497-2-15-						0-C30111	11810	398	10130	34	-2	7.3	4.8	435	-1		9.3	3702	102	3.1	118	0.366	
08-37.7761-103.9861-2-11-						0-C30112	16240	368	9738	60	-2	7.5	5.1	574	-1	-1	11.6	3645	122	4.4	114	0.586	
08-37.8686-103.8225-2-15-						0-C30117	15510	502	7812	-29	-3	8.6	4.2	-361	-1	-1	10.2	3141	126	3.5		0.480	
08-37.8706-103.8047-2-15-						0-C30120	12470	426	10580	42	-2	7.3	5.3	321	-1	-1	10.0	3232	92	3.6	88	0.370	
08-37.8086-103.7878-2-15-						0-C30121	14010	424	7976	40	-2	7.6	4.7	500	-1	1	10.8	3613	86	2.4	-78	0.333	
08-37.7533-103.8011-2-11-						0-C30122	13450	444	7004	35	-2	7.0	5.5	631	-1		12.0	4036	80	3.8	-76	0.325	
08-37.7619-103.6747-2-12-						0-C30124	14010	498	8734	65	-3	7.9	6.2	-342	-1	-1	11.8	2547	84	4.3	108	0.297	
08-37.8500-103.6978-2-15-						0-C30128	19350	511	10480	59	-2	8.4	6.0	-288	-1		13.3	3920	98		81	0.256	
08-37.8303-103.6878-2-15-						0-C30130	12660	499	11310	55	-2	7.2	5.6	-269	-1		11.3	3581	68	3.9	104	0.265	
08-37.8322-103.6850-2-12-						0-C30131	10030	404	10870	44	-2	6.4	5.5	-297	-1	-1	11.2	3744	71	5.3	77	0.313	
08-37.7897-103.7181-2-12-						0-C30134	16070	756	7355	53	-3	7.4	3.8	-424	-7	-1	9.2	3191	81	-2.0	-253	0.359	
08-37.7853-103.6614-2-12-						0-C30135	15850	397	7440	38	-2	8.0	4.8	439	-1	-1	12.1	3724	94	3.2	81	0.306	
08-37.8533-103.6453-2-12-						0-C30137	14350	605	9890	50	-2	8.1	6.1	-320	-1	-1	11.4	3243	91	4.0	101	0.316	
08-37.8281-103.5853-2-15-						0-C30138	12400	370	9321	61	-2	7.0	4.9	-286	-1	-1	11.7	3019	75	3.5	114	0.282	
08-37.8031-103.6022-2-12-						0-C30140	19270	561	9741	-27	-3	7.1	5.6	-371	-1	-1	11.9	3471	72	4.4	110	0.303	
08-37.7658-103.5389-2-12-						0-C30145	12340	490	8406	56	2	6.6	4.5	499	-1	-1	10.7	3274	81	3.9	87	0.346	
08-37.7608-103.5144-2-11-						0-C30147	13840	489	9220	44	-2	7.8	4.8	322	-1	-1	10.3	3143	78	1.7	104	0.291	
08-37.8369-103.5636-2-15-						0-C30152	13030	275	5637	42	-2	7.0	5.0	402	-1		12.3	3498	73	3.4	113	0.358	
08-37.7842-103.4856-2-11-						0-C30153	12320	380	6667	-29	-3	7.4	5.1	588	-1	-1	10.6	2972	78	2.8	68	0.443	
08-37.7814-103.4394-2-11-						0-C30159	2660	76	1244	-10	-1	2.6	2.9	-109			5.1	1730	20	2.6	35	0.588	
08-37.8097-103.4192-2-15-						0-C30161	9184	314	7556	-17	-2	6.3	4.8	342	-1	-1	10.9	3299	64	3.6	121	0.404	
08-37.8514-103.3986-2-15-						0-C30165	10910	380	7282	35	-2	6.3	4.7	485	-1	-1	11.3	3145	80	4.0	76	0.345	
08-37.8300-103.4497-2-12-						0-C30167	11150	285	6674	35	-2	6.3	3.2	554	-1	1	8.8	2548	108	3.0	-62	0.568	
08-37.8669-103.3267-2-11-						0-C30170	9933	274	6441	36	-2	5.8	4.9	-218	-1	-1	10.6	3718	57	3.7	79	0.321	
08-37.8386-103.3386-2-11-						0-C30171	7210	216	3262	-22	-2	5.7	4.0	-217	-1	-1	10.1	4315	44	3.7	69	0.416	
08-37.8214-103.3133-2-12-						0-C30175	12060	386	5332	43	-2	6.5	4.6	-285	-1	-1	10.3	3776	54	3.6	89	0.505	
08-37.8108-103.2961-2-11-						0-C30176	5486	169	4418	-19	-2	7.4	8.9	-213	-1	-1	14.3	4713	59	5.5		0.462	
08-37.7981-103.3083-2-11-						0-C30177	8702	285	6448	37	-2	5.8	5.1	-246	-1	-1	10.0	3654	57	3.9	-74	0.340	
08-37.7631-103.2594-2-15-						0-C30180	9914	319	6818	43	-1	5.9	5.3	-209	1	-1	10.3	3078	54	4.2	68	0.311	
08-37.7661-103.3708-2-11-						0-C30185	6558	196	3376	32	-1	3.7	2.5	-159	-1		5.5	1905	27	2.2	70	0.345	
08-37.8089-103.3631-2-15-						0-C30186	6557	250	5766	-22	-2	5.7	3.4	-237	-1	-1	8.6	3122	49	2.7		0.395	

[illegible]

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE										ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)									Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li
08-37.7931-103.2289-2-15-						0-C30189	-5	-5	-5	-10	-20	-15	5	-10	-15	1	18
08-37.8019-103.1703-2-11-						0-C30193	-5	-5	-5	-10	-20	-15	5	-10	-15	2	20
08-37.7814-103.1783-2-15-						0-C30196	-5	-5	-5	18	-20	-15	8	-10	-15	2	26
08-37.8017-103.1047-2-15-						0-C30201	-5	-5	-5	25	-20	-15	12	-10	-15	2	28
08-37.7744-103.1000-2-15-						0-C30202	-5	-5	-5	-10	-20	-15	11	-10	-15	2	24
08-37.8028-103.0036-2-15-						0-C30204	-5	-5	-5	-10	-20	-15	10	-10	23	1	20
08-37.7294-103.9925-2-11-						0-C30209	-5	-5	-5	-10	-20	-15	14	-10	-15	1	15
08-37.7475-103.9936-2-11-						0-C30211	-5	-5	-5	31	-20	33	-5	-10	16	1	18
08-37.6742-103.9422-2-12-						0-C30215	-5	-5	-5	-10	-20	-15	10	-10	-15	1	28
08-37.6619-103.9506-2-12-						0-C30216	-5	-5	-5	25	-20	22	-5	-10	32	1	15
08-37.6867-103.9061-2-12-						0-C30218	-5	-5	-5	18	-20	17	5	-10	19	-1	27
08-37.6886-103.9075-2-11-						0-C30219	-5	-5	-5	22	-20	18	18	-10	-15	2	24
08-37.6794-103.8642-2-12-						0-C30222	-5	-5	-5	24	-20	19	17	-10	-15	1	22
08-37.7250-103.8206-2-11-						0-C30225	-5	-5	-5	18	-20	-15	12	-10	-15	1	25
08-37.7056-103.8197-2-11-						0-C30226	-5	-5	-5	17	-20	-15	11	-10	-15	2	39
08-37.6325-103.7675-2-12-						0-C30228	-5	-5	-5	12	-20	-15	13	-10	-15	1	29
08-37.7336-103.7806-2-11-						0-C30229	-5	-5	-5	-10	-20	20	7	-10	-15	2	25
08-37.7219-103.7764-2-12-						0-C30231	-5	-5	-5	18	-20	-15	15	-10	17	1	25
08-37.7089-103.7925-2-11-						0-C30232	-5	-5	-5	27	-20	-15	14	-10	-15	2	17
08-37.6847-103.7897-2-12-						0-C30234	-5	-5	-5	26	-20	16	19	-10	-15	-1	8
08-37.6689-103.7253-2-11-						0-C30233	-5	5	-5	-10	-20	15	5	-10	-15	1	40
08-37.6878-103.6800-2-12-						0-C30240	-5	-5	-5	17	-20	-15	18	-10	-15	1	45
08-37.7469-103.7128-2-11-						0-C30243	-5	-5	-5	18	-20	-15	9	-10	-15	2	40
08-37.7408-103.7164-2-12-						0-C30244	-5	-5	-5	18	-20	-15	5	-10	-15	1	36
08-37.7356-103.7264-2-11-						0-C30245	-5	-5	-5	-10	-20	-15	10	-10	-15	2	26
08-37.6811-103.6378-2-12-						0-C30247	-5	-5	-5	20	-20	17	6	-10	-15	1	19
08-37.6350-103.6103-2-15-						0-C30250	-5	-5	-5	-10	-20	-15	-5	-10	-15	2	23
08-37.6692-103.5983-2-11-						0-C30251	-5	-5	-5	-10	-20	-15	11	-10	-15	2	21
08-37.7172-103.5911-2-11-						0-C30252	-5	-5	-5	27	-20	-15	9	-10	-15	1	47
08-37.7178-103.5758-2-12-						0-C30253	-5	-5	-5	20	-20	17	14	-10	-15	2	46
08-37.7203-103.5572-2-11-						0-C30255	-5	-5	-5	18	-20	-15	16	-10	-15	2	39
08-37.6278-103.5333-2-11-						0-C30259	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	25
08-37.6647-103.5289-2-15-						0-C30260	-5	-5	-5	-10	-20	-15	10	-10	-15	-1	16
08-37.6661-103.5208-2-11-						0-C30261	-5	-5	-5	-10	-20	-15	5	-10	-15	1	20
08-37.6575-103.4231-2-12-						0-C30263	-5	-5	-5	10	-20	-15	-5	-10	-15	1	22
08-37.6575-103.4314-2-15-						0-C30264	-5	-5	-5	17	-20	-15	15	-10	-15	2	25
08-37.6997-103.4236-2-12-						0-C30265	-5	-5	-5	-10	-20	-15	8	-10	-15	-1	17
08-37.7119-103.4183-2-15-						0-C30266	-5	-5	-5	-10	-20	-15	7	-10	-15	1	23
08-37.7292-103.4236-2-12-						0-C30267	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	24
08-37.7386-103.3650-2-12-						0-C30277	-5	-5	-5	16	-20	-15	16	-10	-15	2	24
08-37.6811-103.3192-2-15-						0-C30280	-5	-5	-5	12	-20	-15	12	-10	-15	-1	26
08-37.6853-103.3206-2-12-						0-C30281	-5	-5	-5	13	-20	-15	10	-10	-15	1	25
08-37.6756-103.2944-2-15-						0-C30282	-5	-5	-5	10	-20	-15	9	-10	-15	1	23
08-37.6547-103.3406-2-15-						0-C30284	-5	-5	-5	17	-20	-15	11	-10	-15	2	24
08-37.6753-103.1639-2-15-						0-C30290	-5	-5	-5	-10	-20	-15	5	-10	-15	1	26
08-37.6658-103.1544-2-15-						0-C30292	-5	-5	-5	12	-20	-15	5	-10	-15	1	18
08-37.7300-103.1931-2-15-						0-C30293	-5	-5	-5	18	-20	-15	5	-10	-15	-1	15
08-37.6439-103.2453-2-15-						0-C30297	-5	-5	-5	15	-20	-15	7	-10	-15	1	37
08-37.6678-103.2392-2-15-						0-C30299	-5	-5	-5	-10	-20	-15	-5	-10	-15	-1	11
08-37.7286-103.0081-2-11-						0-C30305	-5	-5	-5	13	-20	-15	12	-10	-15	1	11
08-37.7067-103.0125-2-15-						0-C30308	-5	-5	-5	31	-20	-15	6	-10	-15	1	34

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS																	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)																
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu	
08-37.7931-103.2289-2-15-			0-C30189	43160	-0.04		526	15270	57	-53	7.3	30	2.2	5	0.9	10970	9.8	12820	32	0.4			
08-37.8019-103.1703-2-11-			0-C30193	53350	-0.06		630	23150	63	-63	7.4	42	2.7	5	1.1	14480	11.4	16040	43	0.4			
08-37.7814-103.1783-2-15-			0-C30196	63710	-0.10		782	29320	86	-92	6.8	47	3.6	6	1.1	16170	10.6	16710	47	0.4			
08-37.8017-103.1047-2-15-			0-C30201	62530	-0.08		476	11550	76	-78	8.1	43	3.1	6	1.2	16680	10.2	17080	44	0.5			
08-37.7744-103.1000-2-15-			0-C30202	59410	-0.05		669	22680	76	-67	8.6	40	3.1	6	0.9	15470	13.4	18000	39	0.6			
08-37.8028-103.0036-2-15-			0-C30204	41490	-0.05		523	54070	66	-53	7.1	37	2.6	5	0.9	12720	15.3	12310	38	0.5			
08-37.7294-103.9925-2-11-			0-C30209	44370	-0.06		455	164900	61	-87	9.0	34	2.4	4	0.8	13420	6.4	13290	38	0.4			
08-37.7475-103.9936-2-11-			0-C30211	70760	-0.13		530	67950	71	-85	9.2	53	5.5	4	1.2	19950	6.0	18390	35	0.5			
08-37.6742-103.9422-2-12-			0-C30215	64320	-0.09		372	100400	59	-74	8.6	42	3.5	4	0.8	17630	3.3	14880	24	0.3			
08-37.6619-103.9506-2-12-			0-C30216	55310	-0.06		480	138600	62	-68	9.5	43	3.4	5	0.9	17700	8.0	13680	33	0.4			
08-37.6867-103.9061-2-12-			0-C30218	72080	-0.07		471	74630	74	-65	9.2	49	4.9	6	1.0	19540	7.5	14360	41	0.4			
08-37.6886-103.9075-2-11-			0-C30219	71820	-0.08		518	58900	91	-76	9.2	62	3.9	6	1.0	17500	8.5	15630	45	0.5			
08-37.6794-103.8642-2-12-			0-C30222	69860	-0.09		457	52470	64	-71	8.2	53	3.6	5	0.9	18880	7.3	15290	41	0.5			
08-37.7250-103.8206-2-11-			0-C30225	61380	-0.06		533	91120	64	-77	10.1	41	3.3	4	0.9	17470	7.3	17890	43	0.4			
08-37.7056-103.8197-2-11-			0-C30226	63710	-0.07		537	79600	73	-74	9.6	45	3.3	4	1.1	18810	8.4	17540	35	0.6			
08-37.6325-103.7675-2-12-			0-C30228	56140	-0.06		535	80820	71	-73	7.7	43	3.0	4	1.0	15260	7.7	16650	39	0.4			
08-37.7336-103.7806-2-11-			0-C30229	60740	-0.09		576	65260	67	-93	7.8	36	3.4	4	1.0	15940	7.7	17120	36	0.4			
08-37.7219-103.7764-2-12-			0-C30231	60690	-0.06		672	74170	81	-85	10.9	39	3.3	5	1.0	17320	9.6	19560	39	0.5			
08-37.7089-103.7925-2-11-			0-C30232	61640	-0.07		622	73520	73	-85	9.9	43	2.9	5	1.2	17480	7.8	20570	47	0.4			
08-37.6847-103.7897-2-12-			0-C30234	61030	-0.08		587	82520	81	-94	10.5	42	3.2	5	1.3	18250	8.4	18350	41	0.5			
08-37.6689-103.7253-2-11-			0-C30238	61150	-0.09		352	88440	61	-82	7.0	31	4.6	4	1.0	15260	7.1	15450	37	0.4			
08-37.6878-103.6800-2-12-			0-C30240	60070	-0.06		584	95100	61	-74	10.2	40	3.3	5	1.0	17400	7.6	14680	39	0.5			
08-37.7469-103.7128-2-11-			0-C30243	65720	-0.08		596	70030	79	-76	11.4	49	3.7	5	1.2	18110	7.2	18890	44	0.5			
08-37.7408-103.7164-2-12-			0-C30244	62510	-0.08		555	58820	93	-86	10.9	43	3.1	5	1.1	18210	9.7	17130	44	0.5			
08-37.7356-103.7264-2-11-			0-C30245	57500	-0.08		472	67490	76	-92	7.8	37	3.2	4	1.1	17010	9.7	20180	47	0.5			
08-37.6811-103.6378-2-12-			0-C30247	60730	-0.06		586	82000	74	-78	9.8	42	3.4	5	1.2	18350	10.2	17330	42	0.5			
08-37.6350-103.6103-2-15-			0-C30250	40030	-0.05		311	13570	45	-42	5.6	27	2.6	4	0.8	10060	9.3	10930	22	0.3			
08-37.6692-103.5983-2-11-			0-C30251	43620	-0.06		374	7614	72	-59	6.4	31	2.0	5	1.0	9710	14.5	10690	38	0.5			
08-37.7172-103.5911-2-11-			0-C30252	55020	-0.09		419	91390	60	-81	8.7	47	4.0	4	1.0	14170	5.7	12280	24	0.4			
08-37.7178-103.5758-2-12-			0-C30253	65710	-0.07		517	62160	72	-74	11.0	51	4.4	5	0.9	17470	7.4	17540	43	0.5			
08-37.7203-103.5572-2-11-			0-C30255	64380	-0.07		526	62450	65	-77	9.4	45	3.9	4	1.0	17450	5.8	16240	40	0.4			
08-37.6278-103.5333-2-11-			0-C30259	57940	-0.07		-131	86720	50	155	5.9	21	3.6	4	0.6	9740	5.2	19030	31	0.4			
08-37.6647-103.5289-2-15-			0-C30260	34440	-0.06		437	9544	41	-42	4.0	20	1.4	2	0.6	7141	8.0	8850	24	0.3			
08-37.6661-103.5208-2-11-			0-C30261	45480	-0.05		300	32120	52	227	7.9	23	2.2	4	0.8	10070	8.2	9982	25	0.5			
08-37.6575-103.4231-2-12-			0-C30263	56940	-0.06		678	24560	66	-64	6.6	38	3.0	4	1.0	13240	8.4	16860	38	0.4			
08-37.6575-103.4314-2-15-			0-C30264	62400	-0.07		716	22330	72	-74	8.5	40	3.0	5	1.1	14230	8.1	18850	43	0.5			
08-37.6997-103.4236-2-12-			0-C30265	44730	-0.07		841	21150	54	84	5.2	29	2.4	4	0.9	11060	8.9	13330	29	0.4			
08-37.7119-103.4183-2-15-			0-C30266	44400	-0.05		774	19690	50	-51	7.0	24	2.4	4	0.8	9979	9.4	13470	32	0.5			
08-37.7292-103.4236-2-12-			0-C30267	45020	-0.05		1109	31380	62	-51	6.4	36	2.6	5	1.3	11490	14.6	13180	32	0.5			
08-37.7386-103.3650-2-12-			0-C30277	53010	-0.08		414	8050	63	-57	6.6	49	2.7	5	1.0	11650	8.9	12670	33	0.5			
08-37.6811-103.3192-2-15-			0-C30280	56920	-0.09		658	30320	56	-78	6.5	53	3.2	4	1.1	13690	8.1	19470	41	0.5			
08-37.6853-103.3206-2-12-			0-C30281	73230	-0.08		743	37920	106	-81	12.7	55	5.0	6	1.4	23520	13.5	22680	63	0.7			
08-37.6756-103.2944-2-15-			0-C30282	46020	-0.05		1181	37580	55	-58	5.8	27	2.3	4	0.5	11200	8.7	15390	30	0.4			
08-37.6547-103.3406-2-15-			0-C30284	56440	-0.06		615	20680	73	-69	7.1	40	2.9	5	1.1	13430	9.8	18740	38	0.6			
08-37.6753-103.1639-2-15-			0-C30290	41910	-0.06		489	11770	57	-59	5.0	21	1.9	4	0.8	10740	11.0	16200	28	0.4			
08-37.6658-103.1544-2-15-			0-C30292	47280	-0.05		516	12050	59	-52	6.3	31	2.5	4	0.8	11050	9.5	14670	31	0.4			
08-37.7300-103.1931-2-15-			0-C30293	58030	-0.06		688	20690	83	-72	8.2	44	2.8	6	1.1	13850	12.3	18000	43	0.7			
08-37.6439-103.2453-2-15-			0-C30297	49280	-0.07		812	51300	56	-73	6.4	32	2.8	3	0.9	13780	7.5	15290	29	0.4			
08-37.6678-103.2392-2-15-			0-C30299	28380	-0.04		870	12450	38	-37	4.8	19	1.1	3	0.3	6644	8.9	9724	20	0.3			
08-37.7286-103.0081-2-11-			0-C30306	28550	-0.04		363	29060	48	-39	5.6	35	1.3	4	0.8	10650	21.5	7582	29	0.5			
08-37.7067-103.0125-2-15-			0-C30308	62420	-0.06		550	18170	77	-68	8.9	51	3.2	6	1.1	15380	10.1	18190	44	0.5			

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

④

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS (continued)																U/Th RATIO	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE LAB LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)																
							Mg	Mn	Na	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	Ti	V	Yb	Zn		
08-37.7931-103.2289-2-15-			0-C30189			8604	289	6517	30	-1	5.2	4.4	-199	-1	-1	6.8	3340	53	3.1	56	0.341		
08-37.8019-103.1703-2-11-			0-C30193			11690	384	7296	42	-2	7.3	5.2	-229	-1	-1	11.2	3486	68	4.3	69	0.313		
08-37.7814-103.1783-2-15-			0-C30196			14930	402	8483	-27	-3	7.3	5.6	-309	-1	-1	12.3	3696	81	5.5	103	0.301		
08-37.8017-103.1047-2-15-			0-C30201			12610	432	8030	56	-2	7.6	5.4	-310	-1	-1	12.4	3117	76	4.2	78	0.315		
08-37.7744-103.1000-2-15-			0-C30202			11790	405	9041	50	-2	6.8	6.0	-249	-1	1	12.8	3963	70	3.8	63	0.289		
08-37.8028-103.0036-2-15-			0-C30204			10080	341	4989	29	-1	6.3	4.6	-207	-1		11.0	3531	63	3.4	61	0.400		
08-37.7294-103.9925-2-11-			0-C30209			16000	746	5647	-21	-2	6.2	4.2	842	-1	-1	8.4	2927	72	2.3	-66	0.405		
08-37.7475-103.9936-2-11-			0-C30211			14340	352	5548	-36	-4	9.3	4.4	-345	-2	-1	11.0	3309	106	-2.7	-138	0.436		
08-37.6742-103.9422-2-12-			0-C30215			14390	272	4795	50	-3	8.5	3.0	402	-7	-1	9.9	3258	106	-2.1	-285	0.677		
08-37.6619-103.9506-2-12-			0-C30216			14120	326	5279	-18	-2	7.4	4.9	632	-1	-1	11.1	3150	102	3.5	67	0.468		
08-37.6867-103.9061-2-12-			0-C30218			16020	371	4725	64	-2	9.8	5.3	-267	1	-1	13.9	3468	106	4.4	137	0.403		
08-37.6886-103.9075-2-11-			0-C30219			14960	349	6232	47	-2	8.6	6.2	449	-1	-1	13.9	3666	90	4.7	-79	0.388		
08-37.6794-103.8642-2-12-			0-C30222			10860	377	4676	-29	-3	8.5	4.3	-291	-1		13.6	3529	93	4.0	57	0.397		
08-37.7250-103.8206-2-11-			0-C30225			13650	470	7458	53	-2	8.0	5.0	616	-1	-1	12.3	3449	95	4.1	88	0.317		
08-37.7056-103.8197-2-11-			0-C30226			13790	464	7368	49	-2	9.6	5.0	719	-1	-1	11.3	3483	94	3.9	123	0.354		
08-37.6325-103.7675-2-12-			0-C30228			11160	342	7354	45	-2	7.0	5.4	579	-1	-1	10.7	3040	79	4.1	97	0.411		
08-37.7336-103.7806-2-11-			0-C30229			13480	476	8123	47	-3	7.6	4.1	-348	-1	-1	9.9	3027	82	3.6		0.364		
08-37.7219-103.7764-2-12-			0-C30231			15720	591	9400	40	-2	7.8	6.1	396	-1	-1	11.5	4094	82	4.4	85	0.330		
08-37.7089-103.7925-2-11-			0-C30232			14580	644	9647	42	-2	8.3	5.4	653	-1		11.6	3208	74	4.4	88	0.276		
08-37.6847-103.7897-2-12-			0-C30234			13960	625	8573	31	-2	8.0	5.8	-363	-1	-1	14.0	3398	82	4.7	88	0.271		
08-37.6689-103.7253-2-11-			0-C30238			12480	419	5593	-28	-3	7.8	3.5	-315	-7	-1	10.0	2933	83	4.0	-256	0.360		
08-37.6878-103.6800-2-12-			0-C30240			13590	429	7411	43	-2	7.7	4.6	566	-1		11.3	3549	94	2.8	86	0.372		
08-37.7469-103.7128-2-11-			0-C30243			16240	484	7194	55	-2	9.3	6.1	450	-1	-1	12.5	3473	85	2.6	-91	0.384		
08-37.7408-103.7164-2-12-			0-C30244			15960	508	8245	59	-2	8.3	5.8	-333	-1	-1	13.2	3950	86	4.4	-25	0.280		
08-37.7356-103.7264-2-11-			0-C30245			14630	554	8975	38	-3	7.6	5.3	394	-1	-1	10.8	3149	76	4.3	-64	0.380		
08-37.6811-103.6378-2-12-			0-C30247			15900	480	7917	42	-2	7.8	5.4	384	-1		11.8	3765	92	3.4	98	0.364		
08-37.6350-103.6103-2-15-			0-C30250			7301	186	4218	35	-1	5.2	3.6	-159			7.9	2304	43	3.1	57	0.316		
08-37.6692-103.5983-2-11-			0-C30251			6219	252	5917	33	-2	5.3	4.8	-221	-1		10.4	2930	41	4.2	26	0.327		
08-37.7172-103.5911-2-11-			0-C30252			16130	231	5815	-28	-3	7.0	4.3	-284	-5	-1	10.2	2836	86	2.7	-193	0.471		
08-37.7178-103.5758-2-12-			0-C30253			17560	412	8059	45	-2	8.3	5.0	322	-1	-1	12.1	4221	90	4.0	109	0.347		
08-37.7203-103.5572-2-11-			0-C30255			16580	406	7980	48	-2	8.4	4.7	525	-1	-1	11.0	3525	93	3.2	-31	0.355		
08-37.6278-103.5333-2-11-			0-C30259			24430	69	4272	46	-2	6.2	3.7	679	-1	-1	8.8	2472	53	3.4	64	0.443		
08-37.6647-103.5289-2-15-			0-C30260			6543	166	2997	29	-2	3.9	2.2	-176	-1	-1	6.7	2440	36	2.4	-65	0.328		
08-37.6661-103.5208-2-11-			0-C30261			10800	331	4643	-16	-2	5.3	3.8	287	-1	-1	8.1	2412	40	2.4	42	0.407		
08-37.6575-103.4231-2-12-			0-C30263			11980	352	7040	58	-2	7.1	4.3	-236	-1	-1	9.9	3282	57	3.3	65	0.364		
08-37.6575-103.4314-2-15-			0-C30264			12460	351	7878	37	-2	7.1	5.2	-283	-1	-1	11.4	3774	71	3.8	98	0.281		
08-37.6997-103.4236-2-12-			0-C30265			10530	294	5765	39	-2	5.7	3.5	-247	-1	-1	9.4	2799	43	3.4		0.372		
08-37.7119-103.4183-2-15-			0-C30266			11730	292	4689	30	-1	5.1	3.5	-209		-1	8.2	2406	39	2.6	41	0.317		
08-37.7292-103.4236-2-12-			0-C30267			11590	266	4701	52	-2	5.9	4.2	258	-1		10.3	2957	47	3.6	-55	0.427		
08-37.7386-103.3650-2-12-			0-C30277			9002	234	5195	44	-2	5.7	5.4	-231	-1	-1	10.0	2984	55	4.2	-54	0.350		
08-37.6811-103.3192-2-15-			0-C30280			12140	351	7208	-24	-3	6.7	5.1	426	-1	-1	11.2	2977	61	3.1	-40	0.330		
08-37.6853-103.3206-2-12-			0-C30281			22340	376	9489	74	-2	12.2	7.6	556	1	-1	18.7	4223	82	6.0	124	0.257		
08-37.6756-103.2944-2-15-			0-C30282			15710	390	5811	40	-2	5.6	4.5	-241	-1	-1	8.4	2200	45	3.2	103	0.476		
08-37.6547-103.3406-2-15-			0-C30284			13700	392	7167	48	-2	6.6	5.1	-265	-1	-1	11.3	3733	61	3.9	116	0.283		
08-37.6753-103.1639-2-15-			0-C30290			8791	249	6493	34	-2	4.9	3.9	-215	-1		8.1	2077	43	3.4	58	0.321		
08-37.6658-103.1544-2-15-			0-C30292			9037	304	5833	40	-1	5.7	4.3	-206			8.9	3352	55	3.3	47	0.315		
08-37.7300-103.1931-2-15-			0-C30293			12040	359	8670	45	-2	7.0	5.9	-263	1	-1	12.0	3655	72	4.4	108	0.292		
08-37.6439-103.2453-2-15-			0-C30297			12290	399	6993	40	-2	6.2	3.3	1750	-1	-1	8.7	2897	66	3.6	-35	0.402		
08-37.6678-103.2392-2-15-			0-C30299			6695	184	3198	-11	-1	3.4	2.5	-150			5.7	1981	30	1.8	38	0.368		
08-37.7286-103.0081-2-11-			0-C30306			8843	270	2865	22	-1	4.5	4.1	-166			8.2	3108	44	3.7	59	0.390		
08-37.7067-103.0125-2-15-			0-C30308			12690	383	7260	39	-2	7.2	5.7	-265	-1	-1	12.2	3209	71	4.5	95	0.328		

[illegible]

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE									ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY		
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)									Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li
08-37.7172-103.0983-2-15-			0-C30314				-5	-5	-5	19	-20	-15	5	-10	-15	2	29
08-37.6256-103.0817-2-15-			0-C30315				-5	-5	-5	11	-20	-15	14	-10	-15	1	22
08-37.6286-103.1133-2-15-			0-C30316				-5	-5	-5	14	-20	-15	9	-10	-15	2	20
08-37.5389-103.9439-2-12-			0-C30319				-5	-5	-5	23	-20	17	13	-10	-15	1	48
08-37.5414-103.9444-2-12-			0-C30320				-5	-5	-5	16	-20	-15	15	-10	-15	1	28
08-37.6008-103.9636-2-12-			0-C30322				-5	-5	-5	18	-20	-15	9	-10	-15	1	17
08-37.6019-103.9853-2-11-			0-C30323				-5	-5	-5	29	-20	16	10	-10	-15	-1	15
08-37.6197-103.9436-2-12-			0-C30324				-5	-5	-5	34	-20	18	7	-10	18	-1	14
08-37.6128-103.9100-2-11-			0-C30325				-5	-5	-5	24	-20	27	13	-10	-15	1	27
08-37.5250-103.9183-2-12-			0-C30326				-5	-5	-5	21	-20	-15	-5	-10	-15	-1	15
08-37.6039-103.8256-2-12-			0-C30327				-5	-5	-5	28	-20	-15	-5	-10	-15	2	41
08-37.5936-103.8492-2-12-			0-C30328				-5	-5	-5	21	-20	-15	-5	-10	-15	1	27
08-37.5622-103.8414-2-12-			0-C30330				-5	-5	-5	20	-20	-15	15	-10	-15	1	28
08-37.5061-103.8603-2-99-			0-C30331				-5	-5	-5	20	-20	-15	8	-10	-15	1	22
08-37.5350-103.8231-2-12-			0-C30333				-5	-5	-5	25	-20	22	8	-10	-15	2	37
08-37.5472-103.8222-2-11-			0-C30334				-5	-5	-5	-10	-20	-15	12	-10	-15	2	26
08-37.6083-103.8081-2-11-			0-C30335				-5	-5	-5	26	-20	-15	16	-10	-15	1	48
08-37.6150-103.7858-2-11-			0-C30335				-5	-5	-5	-10	-20	-15	11	-10	-15	1	23
08-37.5628-103.7911-2-11-			0-C30337				-5	-5	-5	11	-20	-15	13	-10	-15	1	18
08-37.5536-103.7714-2-12-			0-C30338				-5	-5	-5	23	-20	-15	16	-10	-15	2	29
08-37.5853-103.7647-2-11-			0-C30339				-5	-5	-5	-10	-20	-15	12	-10	-15	1	21
08-37.5028-103.7064-2-11-			0-C30340				-5	-5	-5	-10	-20	-15	-5	-10	-15	1	15
08-37.5356-103.7378-2-12-			0-C30341				-5	-5	-5	-10	-20	-15	13	-10	-15	-1	21
08-37.5339-103.6919-2-12-			0-C30342				-5	-5	-5	11	-20	-15	-5	-10	20	2	14
08-37.6206-103.7281-2-11-			0-C30343				-5	-5	-5	18	-20	-15	9	-10	-15	1	40
08-37.6100-103.6547-2-12-			0-C30344				-5	-5	-5	12	-20	-15	12	-10	-15	1	35
08-37.5267-103.6114-2-15-			0-C30351				-5	-5	-5	12	-20	-15	13	-10	-15	1	24
08-37.5664-103.5028-2-11-			0-C30352				-5	-5	-5	12	-20	18	16	-10	15	1	17
08-37.5636-103.5764-2-11-			0-C30353				-5	-5	-5	-10	-20	-15	9	-10	-15	2	22
08-37.5692-103.5833-2-15-			0-C30354				-5	-5	-5	-10	-20	-15	-5	-10	-15	2	21
08-37.5672-103.5511-2-15-			0-C30356				-5	-5	-5	-10	-20	-15	6	-10	-15	1	17
08-37.6158-103.5694-2-11-			0-C30360				-5	-5	-5	13	-20	-15	17	-10	-15	1	19
08-37.6203-103.5256-2-11-			0-C30361				-5	-5	-5	22	-20	-15	12	-10	-15	2	32
08-37.6017-103.5536-2-15-			0-C30362				-5	-5	-5	12	-20	-15	14	-10	-15	2	25
08-37.5992-103.5489-2-11-			0-C30363				-5	-5	-5	-10	-20	-15	5	-10	-15	2	23
08-37.6186-103.4694-2-15-			0-C30366				-5	-5	-5	14	-20	-15	16	-10	-15	2	30
08-37.5881-103.4703-2-15-			0-C30368				-5	-5	-5	-10	-20	-15	8	-10	-15	2	24
08-37.5769-103.4703-2-15-			0-C30369				-5	-5	-5	-10	-20	-15	13	-10	-15	2	22
08-37.5961-103.3986-2-15-			0-C30375				-5	-5	-5	26	-20	-15	14	-10	-15	2	27
08-37.6228-103.3403-2-15-			0-C30379				-5	-5	-5	20	-20	-15	7	-10	23	2	29
08-37.5414-103.3572-2-15-			0-C30381				-5	-5	-5	-10	-20	-15	6	-10	15	1	16
08-37.6017-103.3056-2-15-			0-C30382				-5	-5	-5	20	-20	-15	7	-10	-15	1	34
08-37.5747-103.3425-2-11-			0-C30383				-5	-5	-5	-10	-20	17	14	-10	-15	2	21
08-37.5481-103.2967-2-15-			0-C30387				-5	-5	-5	-10	-20	-15	-5	-10	17	-1	11
08-37.5281-103.2983-2-11-			0-C30388				-5	-5	-5	-10	-20	-15	7	-10	-15	-1	18
08-37.5803-103.2544-2-15-			0-C30390				-5	-5	-5	-10	-20	-15	9	-10	-15	1	29
08-37.5131-103.2694-2-11-			0-C30391				-5	-5	-5	-10	-20	-15	-5	-10	-15	1	18
08-37.5253-103.2208-2-15-			0-C30395				-5	-5	-5	19	-20	-15	15	-10	-15	1	19
08-37.5561-103.2394-2-15-			0-C30396				-5	-5	-5	14	-20	-15	7	-10	-15	2	26
08-37.5819-103.1592-2-15-			0-C30404				-5	-5	-5	19	-20	-15	12	-10	-15	2	26
08-37.5492-103.1681-2-15-			0-C30407				-5	-5	-5	13	-20	-15	7	-10	-15	1	11

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS																
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu
08-37.7172-103.0983-2-15-			0-C30314			54750	-0.07		601	16590	73	-82	7.4	36	2.1	4	1.2	16240	9.0	20870	44	0.6
08-37.6256-103.0817-2-15-			0-C30315			57720	-0.06		573	13040	82	-67	9.6	41	2.9	6	1.1	15560	11.6	17280	42	0.0
08-37.6286-103.1133-2-15-			0-C30316			46270	-0.05		387	6496	73	-53	6.6	42	2.6	5	1.0	13540	12.3	11940	40	0.4
08-37.5389-103.9439-2-12-			0-C30319			59070	-0.08		532	109600	50	-77	8.6	36	3.8	3	1.0	19880	5.4	15200	23	0.3
08-37.5414-103.9444-2-12-			0-C30320			55080	-0.06		475	128300	57	-68	9.9	37	3.0	4	0.9	18640	6.4	13630	30	0.3
08-37.6008-103.9636-2-12-			0-C30322			47420	-0.06		325	196300	45	-58	8.2	34	3.3	3	0.7	18040	3.1	9935	28	0.2
08-37.6019-103.9853-2-11-			0-C30323			51740	-0.07		381	129500	53	-67	9.5	52	5.1	4	0.9	20530	4.7	15210	33	0.4
08-37.6197-103.9436-2-12-			0-C30324			50500	-0.08		277	163600	53	-70	8.3	34	2.4	3	0.8	19420	4.8	12420	40	0.2
08-37.6128-103.9100-2-11-			0-C30325			60140	-0.06		443	120200	57	-61	10.5	36	4.4	4	0.8	20000	5.1	14480	30	0.4
08-37.5250-103.9183-2-12-			0-C30326			50050	-0.06		543	150600	71	-66	7.7	33	2.8	4	1.1	18920	8.6	13090	29	0.4
08-37.6039-103.8256-2-12-			0-C30327			76730	-0.11		508	28210	80	-76	7.4	46	3.9	6	1.1	18580	8.8	20810	46	0.5
08-37.5936-103.8492-2-12-			0-C30328			63850	-0.09		602	67080	79	-82	8.9	57	4.2	5	1.3	21420	8.3	18600	46	0.5
08-37.5622-103.8414-2-12-			0-C30330			69860	-0.06		479	66400	72	-59	10.0	40	4.1	5	1.1	23110	7.2	14480	38	0.4
08-37.5061-103.8603-2-99-			0-C30331			59000	-0.06		553	74780	72	-67	8.0	40	4.0	5	1.0	17940	9.0	17830	34	0.4
08-37.5350-103.8231-2-12-			0-C30333			68410	-0.07		508	28350	93	-72	10.6	44	3.9	5	1.1	21860	11.3	16860	48	0.6
08-37.5472-103.8222-2-11-			0-C30334			53550	-0.08		473	13320	72	-74	11.3	30	2.3	5	1.1	20850	12.9	13940	36	0.7
08-37.6083-103.8091-2-11-			0-C30335			62690	-0.06		580	77020	68	-70	9.8	41	3.4	5	0.9	18300	7.5	17930	40	0.5
08-37.6150-103.7858-2-11-			0-C30336			63710	-0.06		530	59550	73	-63	7.9	47	3.3	5	1.1	18210	9.6	13910	33	0.4
08-37.5628-103.7911-2-11-			0-C30337			71660	-0.07		675	16100	97	-73	9.1	48	3.7	6	1.2	18730	10.6	20470	42	0.5
08-37.5536-103.7714-2-12-			0-C30338			62580	-0.08		578	10810	76	-72	8.7	46	3.2	5	1.1	15960	10.4	16330	43	0.6
08-37.5853-103.7647-2-11-			0-C30339			57630	-0.06		516	12130	68	-62	8.5	38	2.8	5	0.9	14330	10.0	16160	42	0.1
08-37.5028-103.7064-2-11-			0-C30340			33700	-0.04		536	16390	34	-46	4.4	16	1.5	3	0.8	7286	7.1	13900	21	0.3
08-37.5356-103.7378-2-12-			0-C30341			40750	-0.05		390	18400	48	-55	6.1	24	1.4	4	0.9	9235	8.4	15210	23	0.3
08-37.5339-103.6919-2-12-			0-C30342			32950	-0.05		457	16580	26	-59	4.0	26	-1.1	2	0.8	8006	9.5	15550	15	0.3
08-37.6206-103.7281-2-11-			0-C30343			58970	-0.06		560	63750	68	-67	10.0	44	3.3	5	1.0	16430	9.6	14770	42	0.4
08-37.6100-103.6547-2-12-			0-C30344			58390	-0.06		481	22520	71	88	8.2	39	3.1	6	1.0	15150	11.0	12710	41	0.4
08-37.5267-103.6114-2-15-			0-C30351			45700	-0.05		486	27820	35	-69	5.7	27	2.0	3	0.7	9587	4.8	21300	27	0.3
08-37.5664-103.5028-2-11-			0-C30352			50680	-0.07		438	8037	72	-63	6.7	33	2.7	5	1.2	13640	12.2	14150	32	0.5
08-37.5636-103.5764-2-11-			0-C30353			40770	-0.04		766	43760	42	-57	7.1	21	2.2	3	0.7	9720	6.0	14720	27	0.3
08-37.5692-103.5833-2-15-			0-C30354			39860	-0.04		704	36170	37	-48	4.6	23	1.9	3	0.8	9413	6.4	13620	24	0.3
08-37.5672-103.5511-2-15-			0-C30356			37370	-0.05		541	10270	53	-46	5.1	22	2.0	4	0.7	9229	11.5	12570	25	0.4
08-37.6158-103.5694-2-11-			0-C30360			52890	-0.07		519	60790	60	-78	6.9	-12	2.8	3	0.9	11190	6.1	13940	33	0.4
08-37.6203-103.5256-2-11-			0-C30361			51890	-0.05		298	25210	53	219	7.6	34	3.2	4	0.8	13350	8.2	14350	32	0.4
08-37.6017-103.5536-2-15-			0-C30362			67640	-0.06		477	18300	74	-64	7.6	41	4.1	6	1.0	17640	9.3	19810	44	0.5
08-37.5992-103.5489-2-11-			0-C30363			52930	-0.11		356	13340	66	-54	7.1	55	3.3	4	1.0	14290	9.7	17360	41	0.4
08-37.6186-103.4694-2-15-			0-C30366			60550	-0.06		497	13330	67	-59	7.3	40	3.6	5	1.0	12990	8.6	13990	38	0.5
08-37.5881-103.4703-2-15-			0-C30368			55070	-0.06		500	10120	72	-63	8.1	41	3.2	5	1.0	13200	11.8	14910	33	0.5
08-37.5769-103.4703-2-15-			0-C30369			55540	-0.08		323	10840	69	-62	7.2	29	3.0	4	0.9	13360	10.2	17120	34	0.5
08-37.5961-103.3986-2-15-			0-C30375			59670	-0.06		481	19430	59	-57	8.0	34	2.9	4	0.9	12900	7.6	16080	40	0.4
08-37.6228-103.3403-2-15-			0-C30379			68470	-0.07		643	33920	68	-71	8.3	50	3.9	5	1.1	16480	7.9	19560	39	0.5
08-37.5414-103.3572-2-15-			0-C30381			48260	-0.06		345	10190	70	-58	7.0	36	2.8	5	1.1	10630	13.8	14180	40	0.5
08-37.6017-103.3056-2-15-			0-C30382			65370	-0.09		592	30640	70	-74	7.2	44	3.2	5	0.9	15580	7.4	17150	43	0.4
08-37.5747-103.3425-2-11-			0-C30383			50930	-0.05		460	10960	56	-56	8.4	31	2.3	4	0.8	12160	10.1	15510	31	0.5
08-37.5481-103.2967-2-15-			0-C30387			23710	-0.04		435	7830	27	-30	3.8	16	1.4	2	0.6	6303	9.9	6274	20	0.3
08-37.5281-103.2983-2-11-			0-C30388			42200	-0.05		318	10040	54	-49	5.9	25	2.1	4	0.8	9415	11.1	9405	32	0.5
08-37.5803-103.2544-2-15-			0-C30390			49150	-0.07		542	19160	54	-67	5.7	28	2.8	4	0.9	11030	8.6	16130	29	0.4
08-37.5131-103.2694-2-11-			0-C30391			45950	-0.05		478	20530	52	-42	7.2	21	2.0	4	0.8	10070	9.0	11350	27	0.4
08-37.5253-103.2208-2-15-			0-C30395			47680	-0.05		864	16710	57	63	5.5	28	3.3	4	0.9	10570	11.6	15080	32	0.5
08-37.5561-103.2394-2-15-			0-C30396			62720	-0.06		643	16540	73	-64	7.4	34	3.7	5	1.0	13420	8.4	21220	35	0.6
08-37.5819-103.1592-2-15-			0-C30404			68190	-0.09		529	27930	73	-82	8.2	41	3.8	4	1.3	15910	6.1	22260	40	0.4
08-37.5492-103.1681-2-15-			0-C30407			35310	-0.04		456	9985	42	-34	5.7	27	1.5	3	0.8	8075	11.3	10160	24	0.4

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

4

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS (continued)																U/Th RATIO			
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)																		
							Mg	Mn	Na	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	Ti	V	Yb	Zn				
08-37.7172-103.0983-2-15-						0-C30314	16100	417	9119	50	-2	7.7	5.5	-294	-1	-1	12.2	3237	77	4.0					0.279
08-37.6256-103.0817-2-15-						0-C30315	10590	432	7574	36	-2	7.8	5.5	-266	-1	-1	12.3	4070	72	0.3	79				0.301
08-37.6286-103.1133-2-15-						0-C30316	10630	341	6030	30	-2	6.2	4.7	-205	-1		10.9	3340	55	3.5	72				0.294
08-37.5389-103.9439-2-12-						0-C30319	12620	335	6012	55	-3	8.2	3.7	526	-1	-1	11.1	3045	95	-2.0	-89				0.396
08-37.5414-103.9444-2-12-						0-C30320	10910	330	5631	39	-2	7.8	4.2	582	-1		10.4	3137	100	3.0	93				0.481
08-37.6008-103.9636-2-12-						0-C30322	11700	265	2865	-20	-2	7.1	3.1	829	-1	-1	8.7	1950	98	2.0	78				0.552
08-37.6019-103.9853-2-11-						0-C30323	17550	251	3610	46	-2	8.5	3.8	746	-1		10.1	3719	115	2.7	80				0.545
08-37.6197-103.9436-2-12-						0-C30324	13260	295	3200	43	-2	7.4	3.2	758	-1	-1	8.8	2429	100	2.8					0.602
08-37.6128-103.9100-2-11-						0-C30325	15670	265	4150	40	-2	8.3	4.4	613	-1		9.7	3241	118	1.7	97				0.536
08-37.5250-103.9183-2-12-						0-C30326	10750	350	5037	39	-2	7.3	4.9	608	-1		10.9	2408	86	3.8	72				0.459
08-37.6039-103.8256-2-12-						0-C30327	10930	338	6268	-26	-3	9.2	5.8	-291	-1	-1	14.7	3976	92	4.9	88				0.354
08-37.5936-103.8492-2-12-						0-C30328	13860	396	7518	-29	-3	8.8	5.3	-323	-1	-1	12.5	3514	95	6.8	-85				0.376
08-37.5622-103.8414-2-12-						0-C30330	11870	332	4294	56	-2	8.7	6.3	410	-1	-1	12.9	3598	95	3.3	107				0.465
08-37.5061-103.8603-2-99-						0-C30331	12890	358	7745	-20	-2	7.8	5.6	422	-1	-1	11.0	3472	85	4.2	66				0.482
08-37.5350-103.8231-2-12-						0-C30333	13400	390	6501	48	-2	8.3	7.3	-289	-1	-1	15.2	3633	81	4.5	125				0.322
08-37.5472-103.8222-2-11-						0-C30334	12110	444	6485	49	-2	7.5	6.5	-316	-1		11.7	3039	61	4.1	-92				0.325
08-37.6083-103.8081-2-11-						0-C30335	13550	373	7257	41	-2	7.9	5.4	497	-1		11.8	3520	88	4.3	34				0.356
08-37.6150-103.7858-2-11-						0-C30336	12830	347	5574	55	-2	8.2	4.9	337	-1	-1	11.5	3126	85	4.5	86				0.409
08-37.5628-103.7911-2-11-						0-C30337	13340	439	6439	-24	-2	8.6	7.4	-291	-1	-1	14.4	4149	85	5.2	95				0.292
08-37.5536-103.7714-2-12-						0-C30338	11330	375	6797	42	-2	7.9	5.4	-303	-1	-1	13.1	3001	69	4.4	-79				0.305
08-37.5853-103.7647-2-11-						0-C30339	8869	313	7343	49	-2	7.3	4.8	-238	-1	-1	12.2	3469	61	2.0	94				0.295
08-37.5028-103.7064-2-11-						0-C30340	7453	175	5399	26	-1	3.4	3.0	-159	-1		4.7	1645	25	2.1	35				0.383
08-37.5356-103.7378-2-12-						0-C30341	8881	237	5338	29	-1	4.0	4.0	-207	-1		6.4	2281	42	2.5	93				0.359
08-37.5339-103.6919-2-12-						0-C30342	14060	210	7166	33	-1	3.5	2.3	-217	-1		4.7	2385	33	2.0					0.340
08-37.6206-103.7281-2-11-						0-C30343	12970	368	7551	32	-2	7.7	5.6	533	1	1	12.0	3383	81	3.2	99				0.358
08-37.6100-103.6547-2-12-						0-C30344	8945	309	5846	36	-2	7.2	5.2	240	-1	-1	11.4	3317	67	4.1	125				0.386
08-37.5267-103.6114-2-15-						0-C30351	20320	319	8534	34	-2	4.7	3.2	-245	-1		5.6	2252	36	2.1	96				0.411
08-37.5664-103.5028-2-11-						0-C30352	8800	232	6405	-23	-2	6.9	6.2	-247	-1	-1	12.8	3467	58	3.9					0.797
08-37.5636-103.5764-2-11-						0-C30353	12150	480	4774	37	-1	4.7	3.1	437	-1		6.4	2355	34	2.6	59				0.469
08-37.5692-103.5833-2-15-						0-C30354	11510	292	4716	33	-1	4.5	2.9	302	-1	-1	6.7	2095	33	1.9	45				0.403
08-37.5672-103.5511-2-15-						0-C30356	5302	209	4009	-15	-1	4.3	3.2	-182	-1		8.3	2697	38	3.4	-60				0.301
08-37.6158-103.5694-2-11-						0-C30360	17620	716	4545	-25	-2	6.2	3.5	-389	-1	-1	9.9	2167	43	3.4	-40				0.384
08-37.6203-103.5256-2-11-						0-C30361	18430	222	6642	42	-2	6.5	4.2	-211	-1		10.1	2862	47	2.6	-47				0.267
08-37.6317-103.5536-2-15-						0-C30362	17430	344	6832	51	-2	8.5	5.5	-240	-1	-1	12.4	3797	65	4.2	-12				0.266
08-37.5992-103.5489-2-11-						0-C30363	11060	184	4304	-29	-3	7.0	3.5	-208	-1	-1	11.7	3115	59	4.4	75				0.368
08-37.6186-103.4694-2-15-						0-C30366	11340	264	6106	42	-2	7.4	4.7	234	-1	1	10.3	3657	63	3.6	58				0.350
08-37.5881-103.4703-2-15-						0-C30368	8849	330	5801	-19	-2	6.8	5.6	-257	-1	-1	11.1	3908	65	5.4	-74				0.297
08-37.5769-103.4703-2-15-						0-C30369	10950	303	4865	46	-2	6.9	4.2	-258	-1	-1	9.5	3346	54	3.4					0.326
08-37.5961-103.3986-2-15-						0-C30375	12510	305	5644	47	-2	6.8	4.6	-225	-1		10.6	3536	53	2.9	57				0.264
08-37.6228-103.3403-2-15-						0-C30379	16120	398	8260	43	-2	8.6	4.8	523	-1	-1	12.2	3806	71	5.0	87				0.287
08-37.5414-103.3572-2-15-						0-C30381	7466	271	5220	31	-2	5.5	5.1	-226	-1	-1	10.5	3408	52	4.5	-53				0.314
08-37.6017-103.3056-2-15-						0-C30382	15590	465	5285	69	-3	8.1	4.6	-318	-7	-1	11.6	3372	75	4.4	-261				0.284
08-37.5747-103.3425-2-11-						0-C30383	8872	313	5211	39	-2	5.9	4.1	-227	-1	-1	9.7	3558	61	3.5	69				0.320
08-37.5481-103.2967-2-15-						0-C30387	4531	130	1925	21	-1	3.2	2.3	-127			4.6	1773	23	1.8	28				0.391
08-37.5281-103.2983-2-11-						0-C30388	6661	202	3734	-15	-2	4.8	4.1	-193	-1		8.6	2594	42	3.5	70				0.477
08-37.5803-103.2544-2-15-						0-C30390	11490	308	6933	37	-2	5.6	3.6	-255	-1		9.0	2823	52	3.1	48				0.344
08-37.5131-103.2694-2-11-						0-C30391	12290	218	3109	29	-1	5.3	3.8	-183		-1	8.1	2797	37	2.9	67				0.333
08-37.5253-103.2208-2-15-						0-C30395	10710	265	4444	42	-2	6.1	4.0	-191	-1		9.4	3231	45	3.5	76				0.266
08-37.5561-103.2394-2-15-						0-C30396	13970	442	5671	54	-2	7.1	4.7	-283	-1		10.4	3124	55	3.5	82				0.269
08-37.5819-103.1592-2-15-						0-C30404	15250	426	7101	62	-3	8.2	6.0	-328	-1	-1	10.8	3203	68	3.2	-87				0.296
08-37.5492-103.1681-2-15-						0-C30407	7953	183	2630	34	-1	4.1	3.3	-154			6.8	2578	34	2.8	64				0.338

DOE SAMPLE NUMBER					LASL SAMPLE LOCATION NUMBER AND FIELD DATA																				U CONCENTRATION										
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SCINTILLOMETER (nCi/ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	SEDIMENT SAMPLES ANALYZED BY DELAYED NEUTRON COUNTING (DNC)	UNITS IN ppm
							DATE	HOUR																											
08-37.6169-103.0781-2-11-						0-C30409-09/20/77-11-			30-10.0-	-	-	-	7.0-	650-		5-1-1-5-6-2-2-1-	-4-3-3-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
08-37.6122-103.0742-2-15-						0-C30411-09/20/77-13-			29-	-	-	-	-	-		11-1-1-5-6-	-4-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
08-37.5819-103.0322-2-15-						0-C30413-09/20/77-13-			30-	-	-	-	-	-		11-	-5-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	
08-37.5842-103.0383-2-15-						0-C30414-09/20/77-14-			31-	-	-	-	-	-		5-	-5-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
08-37.5733-103.0333-2-15-						0-C30415-09/20/77-14-			32-	-	C-	-	-	-		2-1-1-3-6-	-4-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
08-37.5908-103.0725-2-15-						0-C30416-09/20/77-15-			32-	-	-	-	-	-		2-	-5-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80	
08-37.5656-103.0631-2-15-						0-C30418-09/20/77-15-			31-	-	-	-	-	-		5-	-5-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.30	
08-37.5503-103.0597-2-15-						0-C30419-09/20/77-16-			30-	-	-	-	-	-		5-	-3-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.30	
08-37.5569-103.0814-2-15-						0-C30421-09/20/77-16-			30-	-	C-	-	-	-		2-	-5-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
08-37.2858-103.0714-2-15-						0-C30427-09/22/77-11-			24-	-	C-	-	-	-		9-1-6-7-6-	-1-	-3-4-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
08-37.3572-103.0567-2-15-						0-C30432-10/06/77-10-			10-	-	C-	-	-	-		5-1-6-7-6-	-1-	-4-3-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
08-37.3244-103.0347-2-15-						0-C30433-10/06/77-11-			12-	-	C-	-	-	-		11-1-6-7-6-	-1-	-1-4-3-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80	
08-37.3067-103.0844-2-15-						0-C30437-10/06/77-14-			14-	-	C-	-	-	-		8-1-6-7-6-	-1-	-1-3-4-2-4-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
08-37.4139-103.9122-2-15-						0-C30443-08/08/77-15-			30-	-	C-	-	-	-		6-1-2-4-6-	-1-	-2-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.30	
08-37.4242-103.9714-2-12-						0-C30444-08/08/77-16-			30-	-	C-	-	-	-		6-1-1-5-6-	-1-	-2-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.70	
08-37.4558-103.9303-2-12-						0-C30448-08/11/77-12-			19-	-	C-	-	-	-		10-1-1-4-6-	-	-4-3-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.20	
08-37.4072-103.8228-2-15-						0-C30454-08/09/77-10-			30-	-	C-	-	-	-		6-1-2-4-6-	-1-	-2-1-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
08-37.3831-103.7731-2-11-						0-C30456-08/09/77-12-			32-24.5-C-	-	-	-	7.7-	370-		5-1-2-6-8-2-2-5-2-1-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.60	
08-37.4353-103.7539-2-11-						0-C30457-08/09/77-13-			34-25.5-C-	-	-	-	7.2-	2300-		5-1-5-7-6-2-2-1-2-1-2-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.60	
08-37.4836-103.8372-2-12-						0-C30459-08/11/77-14-			25-	-	C-	-	-	-		5-1-2-4-6-	-1-	-2-1-2-3-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.10	
08-37.4978-103.8378-2-11-						0-C30460-08/20/77-13-			34-24.2-C-	-	-	-	7.3-	910-		12-1-2-5-6-	-2-1-	-1-3-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.10	
08-37.4272-103.7469-2-11-						0-C30462-08/09/77-14-			33-24.0-C-	-	-	-	7.3-	2200-		5-1-6-4-6-1-2-1-2-1-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30	
08-37.4036-103.7339-2-11-						0-C30463-08/09/77-16-			31-25.2-C-	-	-	-	7.7-	860-		5-1-1-4-6-1-2-1-2-1-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
08-37.3889-103.7200-2-11-						0-C30465-08/09/77-17-			30-25.0-C-	-	-	-	8.1-	200-		7-1-2-7-6-1-2-1-2-1-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80	
08-37.4594-103.7092-2-11-						0-C30466-08/10/77-10-			26-	-	C-	-	-	-		5-1-2-4-6-	-1-	-1-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
08-37.4561-103.7364-2-12-						0-C30468-08/10/77-12-			30-	-	C-	-	-	-		5-1-4-4-6-	-1-	-2-1-2-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20	
08-37.4056-103.6511-2-15-						0-C30471-09/02/77-14-			33-	-	-	-	-	-		5-1-4-4-6-	-1-	-2-1-2-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.70	
08-37.3794-103.6469-2-11-						0-C30472-09/02/77-15-			32-22.5-C-	-	-	-	7.0-	2420-		3-1-4-4-6-2-2-1-2-1-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20	
08-37.4833-103.5556-2-11-						0-C30476-09/01/77-9-			26-19.8-C-	-	-	-	7.7-	830-		5-1-2-5-6-2-3-1-	-1-3-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52.20	
08-37.4389-103.5342-2-11-						0-C30477-09/01/77-11-			28-17.5-C-	-	-	-	7.3-	800-		10-1-2-5-6-2-3-1-	-1-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.50	
08-37.3828-103.5631-2-11-						0-C30479-09/01/77-13-			32-20.0-C-	-	-	-	7.0-	1100-		4-1-4-4-6-1-3-1-1-1-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.40	
08-37.3928-103.6158-2-11-						0-C30480-09/02/77-17-			29-21.0-C-	-	-	-	7.2-	750-		5-1-1-5-6-1-2-1-2-1-3-3-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.90	
08-37.4064-103.6067-2-11-						0-C30481-09/02/77-18-			29-22.5-C-	-	-	-	7.6-	450-		5-1-2-5-6-1-3-2-	-1-3-3-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20	
08-37.4561-103.5822-2-15-						0-C30484-09/03/77-14-			34-	-	C-	-	-	-		3-1-4-4-7-	-1-	-2-2-2-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.60	
08-37.4553-103.5783-2-15-						0-C30485-09/03/77-15-			33-	-	C-	-	-	-		8-1-4-4-7-	-1-	-2-2-2-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.70	
08-37.4544-103.5803-2-11-						0-C30486-09/03/77-15-			33-26.2-C-	-	-	-	6.8-	900-		2-1-4-4-6-2-3-1-2-2-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.60	
08-37.4439-103.5775-2-11-						0-C30487-09/03/77-16-			33-24.2-C-	-	-	-	6.9-	265-		5-1-4-5-6-1-3-2-2-2-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.50	
08-37.4931-103.5003-2-15-						0-C30489-09/05/77-12-			32-	-	C-	-	-	-		6-1-7-7-6-	-1-	-2-1-2-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.10	
08-37.4536-103.5039-2-11-						0-C30490-09/06/77-10-			31-24.8-C-	-	-	-	7.0-	1600-		5-1-1-6-8-2-2-1-2-1-2-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	
08-37.4925-103.4694-2-11-						0-C30491-09/05/77-14-			33-29.2-C-	-	-	-	6.9-	390-		17-1-2-7-9-2-3-1-	-1-3-3-2-	-9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.10	
08-37.4703-103.4731-2-11-						0-C30493-09/06/77-10-			29-	-	C-	-	-	-		5-1-1-7-6-	-1-	-2-1-2-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
08-37.4606-103.4889-2-11-						0-C30494-09/06/77-10-			30-	-	C-	-	-	-		5-1-1-5-6-	-1-	-2-1-2-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
08-37.4461-103.4817-2-11-						0-C30495-09/06/77-11-			31-20.8-C-	-	-	-	7.0-	1150-		3-1-7-5-6-2-2-1-2-1-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
08-37.4117-103.4761-2-11-						0-C30496-09/06/77-13-			31-14.2-C-	-	-	-	7.1-	1100-		6-1-2-5-6-2-3-1-	-1-3-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.30	
08-37.4061-103.4883-2-11-						0-C30497-09/06/77-14-			32-20.7-C-	-	-	-	6.8-	800-		7-1-2-5-6-2-3-2-	-1-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.50	
08-37.3917-103.4683-2-11-						0-C30498-09/06/77-14-			32-19.5-C-	-	-	-	6.9-	1000-		8-1-7-6-5-2-3-1-	-1-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.80	
08-37.4100-103.4517-2-11-						0-C30499-09/06/77-15-			33-24.5-C-	-	-	-	7.1-	740-		6-1-7-7-6-2-2-2-2-1-3-4-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.90	
08-37.4086-103.4336-2-15-						0-C30500-09/06/77-16-			32-	-	-	-	-	-		6-1-7-5-6-	-1-	-2-1-3-4-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30	
08-37.4003-103.4172-2-11-						0-C30501-09/06/77-16-			32-24.5-C-	-																									

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

②

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE									ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY		
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)									Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li
08-37.6169-103.0781-2-11-						0-C30409	-5	-5	-5	10	-20	-15	7	-10	-15	-1	15
08-37.6122-103.0742-2-15-						0-C30411	-5	-5	-5	-10	-20	-15	7	-10	-15	1	15
08-37.5819-103.0322-2-15-						0-C30413	-5	-5	-5	-10	-20	-15	5	-10	-15	2	20
08-37.5842-103.0383-2-15-						0-C30414	-5	-5	-5	20	-20	-15	9	-10	18	2	24
08-37.5733-103.0333-2-15-						0-C30415	-5	-5	-5	14	-20	-15	-5	-10	-15	1	14
08-37.5908-103.0725-2-15-						0-C30416	-5	-5	-5	10	-20	-15	7	-10	-15	2	11
08-37.5656-103.0631-2-15-						0-C30418	-5	-5	-5	-10	-20	-15	13	-10	-15	1	18
08-37.5503-103.0597-2-15-						0-C30419	-5	-5	-5	22	-20	-15	12	-10	-15	2	22
08-37.5569-103.0814-2-15-						0-C30421	-5	-5	-5	15	-20	-15	-5	-10	-15	1	17
08-37.2858-103.0714-2-15-						0-C30427	-5	-5	-5	20	-20	-15	19	-10	-15	2	21
08-37.3572-103.0567-2-15-						0-C30432	-5	-5	-5	12	-20	-15	22	-10	-15	-1	18
08-37.3244-103.0347-2-15-						0-C30433	-5	-5	-5	28	-20	-15	23	-10	20	2	22
08-37.3067-103.0844-2-15-						0-C30437	-5	-5	-5	11	-20	-15	13	-10	-15	1	20
08-37.4139-103.9122-2-15-						0-C30443	-5	-5	-5	17	-20	18	17	-10	-15	2	31
08-37.4242-103.9714-2-12-						0-C30444	-5	-5	-5	22	-20	-15	14	-10	-15	1	43
08-37.4558-103.9303-2-12-						0-C30448	-5	-5	-5	22	-20	-15	14	-10	-15	2	43
08-37.4072-103.8228-2-15-						0-C30454	-5	-5	-5	-10	-20	-15	16	-10	-15	1	22
08-37.3831-103.7731-2-11-						0-C30456	-5	-5	-5	-10	-20	-15	13	-10	-15	1	26
08-37.4353-103.7539-2-11-						0-C30457	-5	-5	-5	17	-20	-15	11	-10	-15	1	51
08-37.4836-103.8372-2-12-						0-C30459	-5	-5	-5	22	-20	-15	22	-10	-15	2	30
08-37.4978-103.8378-2-11-						0-C30460	-5	-5	-5	22	-20	19	18	-10	-15	3	70
08-37.4272-103.7469-2-11-						0-C30462	-5	-5	-5	11	-20	-15	5	-10	-15	2	51
08-37.4036-103.7339-2-11-						0-C30463	-5	-5	-5	-10	-20	-15	5	-10	-15	2	19
08-37.3889-103.7200-2-11-						0-C30465	-5	-5	-5	20	-20	-15	15	-10	-15	2	19
08-37.4594-103.7092-2-11-						0-C30466	-5	-5	-5	13	-20	-15	13	-10	-15	2	18
08-37.4561-103.7364-2-12-						0-C30468	-5	-5	-5	-10	-20	21	13	-10	-15	2	29
08-37.4056-103.6511-2-15-						0-C30471	-5	-5	-5	-10	-20	-15	6	-10	-15	-1	36
08-37.3794-103.6469-2-11-						0-C30472	-5	-5	-5	11	-20	-15	-5	-10	-15	2	42
08-37.4833-103.5556-2-11-						0-C30476	-5	-5	-5	-10	-20	-15	5	-10	-15	-1	7
08-37.4389-103.5342-2-11-						0-C30477	-5	-5	-5	10	-20	16	14	-10	-15	2	30
08-37.3828-103.5631-2-11-						0-C30479	-5	-5	-5	14	-20	-15	10	-10	-15	2	35
08-37.3928-103.6158-2-11-						0-C30480	-5	-5	-5	14	-20	-15	18	-10	-15	1	28
08-37.4064-103.6067-2-11-						0-C30481	-5	-5	-5	14	-20	-15	6	-10	-15	2	26
08-37.4561-103.5822-2-15-						0-C30484	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	12
08-37.4553-103.5783-2-15-						0-C30485	-5	-5	-5	12	-20	-15	7	-10	-15	1	14
08-37.4544-103.5808-2-11-						0-C30486	-5	-5	-5	-10	-20	-15	9	-10	-15	2	18
08-37.4439-103.5775-2-11-						0-C30487	-5	-5	-5	-10	-20	-15	6	-10	21	2	20
08-37.4931-103.5003-2-15-						0-C30489	-5	-5	-5	-10	-20	-15	-5	-10	16	2	26
08-37.4536-103.5039-2-11-						0-C30490	-5	-5	-5	-10	-20	-15	-5	-10	-15	2	25
08-37.4925-103.4694-2-11-						0-C30491	-5	-5	-5	10	-20	-15	36	-10	-15	1	22
08-37.4703-103.4731-2-11-						0-C30493	-5	-5	-5	-10	-20	-15	6	-10	-15	2	25
08-37.4606-103.4889-2-11-						0-C30494	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	21
08-37.4461-103.4817-2-11-						0-C30495	-5	-5	-5	-10	-20	-15	10	-10	-15	1	20
08-37.4117-103.4761-2-11-						0-C30496	-5	-5	-5	15	-20	-15	16	-10	-15	1	21
08-37.4061-103.4883-2-11-						0-C30497	-5	-5	-5	13	-20	-15	-5	-10	15	1	14
08-37.3917-103.4683-2-11-						0-C30498	-5	-5	-5	19	-20	-15	13	-10	-15	2	20
08-37.4100-103.4517-2-11-						0-C30499	-5	-5	-5	16	-20	-15	7	-10	-15	2	25
08-37.4086-103.4336-2-15-						0-C30500	-5	-5	-5	-10	-20	-15	14	-10	-15	2	26
08-37.4003-103.4172-2-11-						0-C30501	-5	-5	-5	16	-20	-15	9	-10	-15	1	14
08-37.4433-103.4300-2-15-						0-C30504	-5	-5	-5	-10	-20	-15	7	-10	-15	-1	8
08-37.4658-103.4211-2-15-						0-C30505	-5	-5	-5	-10	-20	-15	9	-10	-15	1	19

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS																
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu
08-37.6169-103.0781-2-11-			0-C30409	40220	-0.06		371	18150	52	1710	8.9	31	2.5	5	0.8	10340	11.1	11420	32	0.4		
08-37.6122-103.0742-2-15-			0-C30411	41590	-0.06		416	8974	67	-55	5.4	38	1.8	5	0.9	10520	12.9	11700	36	0.5		
08-37.5819-103.0322-2-15-			0-C30413	48450	-0.07		479	11700	72	-69	6.4	38	2.7	5	0.9	12560	12.2	12060	36	0.6		
08-37.5842-103.0383-2-15-			0-C30414	55200	-0.05		570	8942	79	-63	8.5	39	2.8	6	1.0	13380	10.9	15910	40	0.5		
08-37.5733-103.0333-2-15-			0-C30415	40960	-0.05		418	6752	66	-42	6.1	35	2.0	5	0.7	10920	12.9	8785	36	0.5		
08-37.5908-103.0725-2-15-			0-C30416	45140	-0.06		452	12580	78	-57	6.5	45	2.2	6	0.9	11620	16.3	13770	42	0.7		
08-37.5656-103.0631-2-15-			0-C30418	53280	-0.08		421	7410	82	-72	8.0	49	-1.5	5	1.0	13570	15.6	15250	46	0.6		
08-37.5503-103.0597-2-15-			0-C30419	50020	-0.05		389	7481	65	-56	12.5	33	3.1	5	1.0	13040	11.0	11130	35	0.5		
08-37.5569-103.0814-2-15-			0-C30421	52610	-0.06		447	8080	75	-56	7.3	38	3.0	6	1.1	12900	13.5	12570	38	0.5		
08-37.2858-103.0714-2-15-			0-C30427	58140	-0.07		724	12420	92	-83	9.0	53	3.5	6	1.0	17670	10.1	20330	45	0.6		
08-37.3572-103.0567-2-15-			0-C30432	73470	-0.09		745	17910	77	-84	9.0	47	4.1	4	1.0	19610	6.8	20440	34	0.5		
08-37.3244-103.0347-2-15-			0-C30433	72490	-0.06		719	10380	77	-77	11.1	61	4.3	6	1.2	19490	9.8	22400	47	0.6		
08-37.3067-103.0844-2-15-			0-C30437	59430	-0.06		664	13410	81	-76	8.4	40	3.5	6	1.2	17370	9.8	20950	39	0.5		
08-37.4139-103.9122-2-15-			0-C30443	70570	-0.07		626	14350	90	-70	9.1	47	3.5	5	1.2	19680	9.5	19150	45	0.5		
08-37.4242-103.9714-2-12-			0-C30444	73250	-0.09		566	30260	71	-80	8.5	51	4.8	5	1.1	20840	7.7	19610	42	0.5		
08-37.4558-103.9303-2-12-			0-C30448	72820	-0.07		535	68040	68	-65	9.8	46	4.1	5	1.1	18520	7.2	18390	37	0.5		
08-37.4072-103.8228-2-15-			0-C30454	59310	-0.06		576	9193	64	-61	7.3	34	3.2	5	1.0	13460	11.1	14000	35	0.5		
08-37.3831-103.7731-2-11-			0-C30456	62860	-0.07		463	5614	86	-64	8.4	38	2.4	6	1.0	11500	11.9	13670	49	0.6		
08-37.4353-103.7539-2-11-			0-C30457	54550	-0.05		654	44160	47	-58	6.5	28	2.7	4	0.9	13070	7.2	18040	26	0.4		
08-37.4836-103.8372-2-12-			0-C30459	58410	-0.07		504	11440	33	-59	8.6	42	3.7	5	1.1	15800	8.3	16630	43	0.5		
08-37.4978-103.8378-2-11-			0-C30460	68000	-0.09		456	6348	69	-75	13.8	34	5.5	4	1.4	14910	9.0	15770	45	0.5		
08-37.4272-103.7469-2-11-			0-C30462	62000	-0.06		530	26470	57	-57	8.4	32	3.3	4	0.9	14050	7.0	20880	37	0.5		
08-37.4036-103.7339-2-11-			0-C30463	49310	-0.05		421	15280	60	-52	5.5	34	2.6	4	0.8	12120	11.0	12770	29	0.4		
08-37.3889-103.7200-2-11-			0-C30465	58320	-0.06		485	13530	63	-64	8.1	40	2.6	5	1.0	12710	10.2	11320	41	0.5		
08-37.4594-103.7092-2-11-			0-C30466	45160	-0.06		450	7865	58	-58	5.4	40	2.5	4	0.8	11250	10.9	12850	37	0.4		
08-37.4561-103.7364-2-12-			0-C30468	56550	-0.06		645	45260	66	-65	9.1	33	2.9	8	1.3	14020	8.6	16950	44	0.6		
08-37.4056-103.6511-2-15-			0-C30471	41850	-0.04		567	35840	47	-50	5.7	25	2.2	3	0.8	9835	6.8	14110	25	0.3		
08-37.3794-103.6469-2-11-			0-C30472	56270	-0.06		567	36460	61	61	6.4	31	3.2	4	0.9	12880	7.0	17860	30	0.5		
08-37.4833-103.5556-2-11-			0-C30476	30130	-0.08		311	186100	51	135	6.8	-13	-1.7	2	0.5	8366	4.6	6819	43	0.4		
08-37.4389-103.5342-2-11-			0-C30477	56350	-0.06		545	16700	78	-61	9.6	48	2.9	6	1.1	14260	11.7	15830	43	0.6		
08-37.3828-103.5631-2-11-			0-C30479	50690	-0.05		714	40020	52	-53	6.1	24	2.2	4	0.9	12120	8.1	15940	26	0.3		
08-37.3928-103.6158-2-11-			0-C30480	50750	-0.05		330	9831	66	-56	6.7	33	2.9	5	1.0	11650	8.5	12310	34	0.4		
08-37.4064-103.6067-2-11-			0-C30481	57000	-0.07		454	8691	79	-70	6.7	33	2.9	5	0.7	13470	12.4	13500	40	0.6		
08-37.4561-103.5822-2-15-			0-C30484	34500	-0.04		519	7478	26	-49	5.5	18	1.2	3	0.8	5532	8.8	15890	16	0.3		
08-37.4553-103.5783-2-15-			0-C30485	38610	-0.03		494	8756	26	-49	4.5	12	1.7	2	0.6	6505	5.9	18100	17	0.2		
08-37.4544-103.5808-2-11-			0-C30486	36380	-0.05		566	16050	37	-53	4.5	21	1.5	3	0.9	8417	9.7	14170	21	0.3		
08-37.4439-103.5775-2-11-			0-C30487	44550	-0.04		562	8388	35	-56	6.1	27	1.9	3	0.7	9171	7.3	18390	23	0.3		
08-37.4931-103.5003-2-15-			0-C30489	52100	-0.05		598	48510	52	-62	6.0	23	2.4	4	1.0	12400	6.9	17930	24	0.4		
08-37.4536-103.5039-2-11-			0-C30490	60350	-0.07		643	20310	76	-66	7.6	39	3.1	5	1.1	14670	9.7	18330	34	0.4		
08-37.4925-103.4694-2-11-			0-C30491	83600	-0.10		377	-609	134	130	6.7	49	3.3	8	1.7	19740	14.9	9929	74	0.8		
08-37.4703-103.4731-2-11-			0-C30493	44690	-0.05		769	38330	59	-53	6.9	27	2.2	4	0.9	11290	8.3	12200	34	0.4		
08-37.4606-103.4889-2-11-			0-C30494	54710	-0.06		687	31010	64	-58	6.0	32	2.6	5	1.0	13880	8.7	15060	38	0.4		
08-37.4461-103.4817-2-11-			0-C30495	48330	-0.06		839	29490	61	-61	6.4	34	2.2	4	1.0	11410	10.1	10220	37	0.5		
08-37.4117-103.4761-2-11-			0-C30496	55780	-0.08		544	32970	79	-80	8.5	40	3.8	4	1.1	15000	10.9	14820	42	0.4		
08-37.4061-103.4883-2-11-			0-C30497	42770	-0.05		463	11710	59	-55	7.2	39	1.9	4	0.8	12380	10.6	13140	32	0.4		
08-37.3917-103.4683-2-11-			0-C30498	54420	-0.06		830	17010	65	118	14.0	41	2.9	5	1.1	13400	11.8	15330	42	0.6		
08-37.4100-103.4517-2-11-			0-C30499	57210	-0.06		733	18430	68	-60	7.1	29	2.1	5	1.1	13490	9.6	13950	40	0.4		
08-37.4086-103.4336-2-15-			0-C30500	58290	-0.08		670	24780	72	-70	6.8	32	3.4	4	1.0	14050	9.9	16210	43	0.5		
08-37.4003-103.4172-2-11-			0-C30501	34810	-0.04		779	24900	39	-38	6.0	24	1.2	3	0.6	9106	8.4	9640	21	0.3		
08-37.4433-103.4300-2-15-			0-C30504	26060	-0.04		212	5084	37	-30	3.8	25	1.4	3	0.6	6915	17.1	6148	21	0.3		
08-37.4658-103.4211-2-15-			0-C30505	40970	-0.07		393	10940	56	-45	5.9	33	1.8	3	0.7	9229	7.7	11070	28	0.4		

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

4

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS (continued)															U/Th RATIO	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Mg	Mn	Na	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	Ti	V	Yb		Zn
08-37.6169-103.0781-2-11-			0-C30409			7151	266	5896	-17	-2	5.8	4.2	-220	1	-1	8.5	3513	43	3.5	78	0.400	
08-37.6122-103.0742-2-15-			0-C30411			7039	268	6100	35	-2	5.4	4.9	-209	-1	1	10.8	3986	50	4.3	-34	0.315	
08-37.5819-103.0322-2-15-			0-C30413			7015	347	6797	-22	-2	6.5	4.6	-263	-1	-1	11.0	3767	62	4.2	76	0.336	
08-37.5842-103.0383-2-15-			0-C30414			7810	411	7343	44	-2	6.7	6.4	-251	-1	-1	12.0	3932	70	3.7	78	0.292	
08-37.5733-103.0333-2-15-			0-C30415			5763	240	4101	-15	-2	5.9	4.6	-180	-1	-1	9.1	3340	52	2.8	65	0.374	
08-37.5908-103.0725-2-15-			0-C30416			10000	295	5939	35	-2	5.9	5.9	-230	-1	1	11.4	3952	57	5.0	72	0.333	
08-37.5656-103.0631-2-15-			0-C30418			8456	415	7020	-23	-2	7.0	4.1	-289	-1	-1	12.4	3914	68	4.1	112	0.347	
08-37.5503-103.0597-2-15-			0-C30419			7846	630	4241	-17	-1	6.3	5.3	-281	-1	-1	9.6	3483	60	3.7	98	0.656	
08-37.5569-103.0814-2-15-			0-C30421			7602	358	5274	-18	-2	7.3	5.6	-227	-1	-1	12.2	3965	64	4.4	82	0.295	
08-37.2858-103.0714-2-15-			0-C30427			12580	553	8737	62	-2	8.3	6.4	-338	-1	-1	13.6	4165	81	5.1	88	0.250	
08-37.3572-103.0567-2-15-			0-C30432			12700	535	7792	-27	-3	9.5	5.0	-343	-1	-1	13.1	4097	94	4.8	-57	0.244	
08-37.3244-103.0347-2-15-			0-C30433			11470	631	9017	50	-2	8.9	6.3	-319	-1	-1	14.7	4445	91	4.9	-79	0.259	
08-37.3067-103.0844-2-15-			0-C30437			10430	542	9937	34	-2	8.1	6.0	-282	-1	-1	11.6	3788	85	3.9	102	0.276	
08-37.4139-103.9122-2-15-			0-C30443			12350	379	6922	42	-2	8.3	6.2	-282	-1	-1	13.3	3749	73	4.5	-37	0.323	
08-37.4242-103.9714-2-12-			0-C30444			14890	388	7108	-30	-3	8.9	4.9	-308	-1	-1	14.4	3943	93	4.3	-112	0.326	
08-37.4558-103.9303-2-12-			0-C30448			16270	353	5592	55	-2	8.6	6.5	417	-1	-1	13.0	3713	93	3.9	68	0.400	
08-37.4072-103.8228-2-15-			0-C30454			9099	318	7318	46	-2	7.3	4.9	-225	1	-1	11.5	3524	57	4.2	104	0.313	
08-37.3831-103.7731-2-11-			0-C30456			6658	227	5244	-21	-2	6.9	6.0	-251	-1	-2	14.7	4166	59	4.8	-79	0.313	
08-37.4353-103.7539-2-11-			0-C30457			24370	397	4889	40	-2	6.9	4.5	680	-1	-1	8.4	2868	50	2.8	79	0.548	
08-37.4836-103.8372-2-12-			0-C30459			10390	393	6069	45	-2	8.2	6.2	261	-1	-1	12.9	3754	79	4.2	-41	0.318	
08-37.4978-103.8378-2-11-			0-C30460			10350	180	7827	67	-3	9.6	4.1	-259	-1	-1	12.6	3546	71	3.3	-94	0.643	
08-37.4272-103.7469-2-11-			0-C30462			26700	387	4621	43	-2	7.3	4.7	-250	-1	-1	10.8	3190	54	3.2	64	0.306	
08-37.4036-103.7339-2-11-			0-C30463			8575	303	5160	37	-2	6.1	3.9	-204	-1	-1	11.0	3427	49	3.1	90	0.309	
08-37.3889-103.7200-2-11-			0-C30465			8521	342	5995	27	-2	6.3	6.5	-254	-1	-1	10.6	3089	63	3.9	89	0.358	
08-37.4594-103.7092-2-11-			0-C30466			8059	270	5815	-18	-2	5.5	3.4	-227	-1	-1	10.4	2386	50	3.8	99	0.288	
08-37.4561-103.7364-2-12-			0-C30468			15440	388	7115	40	-2	6.9	6.1	751	-1	2	10.2	3550	58	5.5	71	0.412	
08-37.4056-103.6511-2-15-			0-C30471			13130	357	4655	32	-1	5.3	3.5	368	-1	-1	6.9	2469	41	2.4	51	0.391	
08-37.3794-103.6469-2-11-			0-C30472			23250	361	3997	47	-2	6.4	4.8	-257	-1	-1	9.1	3202	49	3.0	-73	0.462	
08-37.4833-103.5556-2-11-			0-C30476			14760	199	3939	-26	-2	3.9	5.3	887	-1	-1	5.1	2056	40	-2.0	83	10.235	
08-37.4389-103.5342-2-11-			0-C30477			11430	192	6801	49	-2	8.3	6.5	322	-1	-1	13.5	4272	77	3.3	98	0.556	
08-37.3828-103.5631-2-11-			0-C30479			16330	444	3905	38	-2	6.4	4.3	343	-1	-1	8.6	2468	53	3.2	89	0.512	
08-37.3928-103.6158-2-11-			0-C30480			9132	291	5738	33	-2	5.8	4.6	-221	-1	-1	9.7	3133	57	3.1	98	0.402	
08-37.4064-103.6067-2-11-			0-C30481			6503	295	6450	-23	-2	7.1	5.1	-266	-1	-1	12.4	3395	62	4.2	130	0.339	
08-37.4561-103.5822-2-15-			0-C30484			7736	140	6791	29	-1	2.9	2.7	-161	-1	-1	3.7	1992	19	2.0	24	0.432	
08-37.4553-103.5783-2-15-			0-C30485			5993	176	7356	39	-1	3.4	2.3	-159	-1	-1	3.8	1830	26	1.9	-45	0.447	
08-37.4544-103.5808-2-11-			0-C30486			6616	200	5565	40	-2	4.1	2.7	-210	-1	-1	5.3	1934	28	1.6	-40	0.491	
08-37.4439-103.5775-2-11-			0-C30487			6856	185	8097	33	-1	4.3	3.5	-187	-1	-1	6.2	2079	31	2.5	-23	0.726	
08-37.4931-103.5003-2-15-			0-C30489			15010	400	6432	36	-2	6.3	3.9	382	-1	-1	8.1	2386	44	2.8	61	0.506	
08-37.4536-103.5039-2-11-			0-C30490			14110	334	5196	47	-2	7.0	5.0	-267	-1	-1	11.3	3480	53	3.6	-11	0.327	
08-37.4925-103.4694-2-11-			0-C30491			5294	66	3193	-33	-3	11.0	10.3	322	-1	-1	19.2	4697	64	7.4	-	0.943	
08-37.4703-103.4731-2-11-			0-C30493			13440	356	4607	31	-2	5.7	3.8	349	-1	-1	8.5	2187	45	3.5	-49	0.424	
08-37.4606-103.4889-2-11-			0-C30494			15570	369	5928	58	-2	6.7	4.2	-229	-1	-1	9.3	2692	54	2.7	71	0.366	
08-37.4461-103.4817-2-11-			0-C30495			12160	377	4800	36	-2	5.7	4.2	-254	-1	-1	9.3	2730	41	3.4	81	0.366	
08-37.4117-103.4761-2-11-			0-C30496			12710	364	7358	-29	-3	7.5	4.6	-326	-1	-1	10.6	3339	66	4.2	125	0.689	
08-37.4061-103.4883-2-11-			0-C30497			7999	296	5808	36	-1	5.8	4.8	266	2	-1	9.5	3194	49	3.2	84	0.789	
08-37.3917-103.4683-2-11-			0-C30498			10070	271	9158	49	-2	6.4	5.6	426	-1	-1	11.5	3471	67	4.6	-51	0.591	
08-37.4100-103.4517-2-11-			0-C30499			11470	327	5003	46	-2	6.9	4.9	-254	-1	-1	12.5	3046	51	3.9	-	0.472	
08-37.4086-103.4336-2-15-			0-C30500			16410	396	5841	-24	-2	7.5	4.0	-301	-1	-1	10.1	2871	56	4.9	103	0.327	
08-37.4003-103.4172-2-11-			0-C30501			7644	247	2762	17	-1	4.4	2.9	-170	-1	-1	6.8	2302	38	2.1	37	0.441	
08-37.4433-103.4300-2-15-			0-C30504			3968	136	2520	-11	-1	3.8	2.7	-126	-1	-1	6.6	2360	32	2.7	37	0.379	
08-37.4658-103.4211-2-15-			0-C30505			6282	195	3410	24	-2	4.5	4.2	-187	-1	-1	8.4	2382	36	4.8	57	0.274	

[illegible]

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE										ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY		
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)										Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li	
08-37.4442-103.3983-2-11-			0-C30507	-5	-5	-5	16	-20	-15	-5	-10	-15	2	24				
08-37.4161-103.4053-2-11-			0-C30508	-5	-5	-5	11	-20	15	-5	-10	-15	2	22				
08-37.3997-103.3867-2-11-			0-C30510	-5	-5	-5	11	-20	-15	20	-10	-15	2	19				
08-37.4561-103.3878-2-11-			0-C30511	-5	-5	-5	15	-20	-15	11	-10	15	2	24				
08-37.4897-103.3647-2-15-			0-C30512	-5	-5	-5	15	-20	-15	-5	-10	-15	1	17				
08-37.3986-103.3217-2-11-			0-C30514	-5	-5	-5	11	-20	-15	14	-10	-15	2	25				
08-37.4094-103.3544-2-11-			0-C30515	-5	-5	-5	30	-20	-15	12	-10	-15	-1	13				
08-37.4258-103.3642-2-11-			0-C30516	-5	-5	-5	13	-20	-15	11	-10	-15	1	18				
08-37.4692-103.3667-2-11-			0-C30517	-5	-5	-5	14	-20	-15	7	-10	-15	1	25				
08-37.4944-103.2761-2-11-			0-C30519	-5	-5	-5	13	-20	-15	5	-10	-15	2	17				
08-37.4581-103.2800-2-12-			0-C30520	-5	-5	-5	32	-20	-15	14	-10	-15	2	29				
08-37.4342-103.2636-2-15-			0-C30522	-5	-5	-5	17	-20	-15	15	-10	20	2	30				
08-37.4183-103.3108-2-12-			0-C30525	-5	-5	-5	-10	-20	-15	18	-10	-15	1	20				
08-37.4136-103.2994-2-11-			0-C30526	-5	-5	-5	-10	-20	-15	8	-10	-15	1	12				
08-37.4378-103.1764-2-15-			0-C30532	-5	-5	-5	19	-20	-15	6	-10	-15	2	22				
08-37.4372-103.1547-2-15-			0-C30533	-5	-5	-5	10	-20	-15	6	-10	-15	1	16				
08-37.3981-103.1931-2-15-			0-C30537	-5	-5	-5	11	-20	-15	5	-10	-15	2	25				
08-37.4217-103.2053-2-15-			0-C30540	-5	-5	-5	15	-20	-15	-5	-10	-15	2	20				
08-37.4681-103.1989-2-15-			0-C30541	-5	-5	-5	-10	-20	-15	5	-10	-15	2	24				
08-37.4606-103.0981-2-15-			0-C30546	-5	-5	-5	11	-20	-15	9	-10	-15	2	16				
08-37.4108-103.0808-2-15-			0-C30550	-5	-5	-5	-10	-20	-15	-5	-10	-15	-1	4				
08-37.2925-103.9161-2-15-			0-C30555	-5	-5	-5	13	-20	-15	10	-10	-15	1	35				
08-37.3017-103.8867-2-15-			0-C30557	-5	-5	-5	18	-20	-15	15	-10	-15	2	29				
08-37.3358-103.9519-2-11-			0-C30565	-5	-5	-5	-10	-20	-15	12	-10	-15	3	17				
08-37.3417-103.9683-2-11-			0-C30567	-5	-5	-5	22	-20	-15	24	-10	16	1	32				
08-37.3572-103.9947-2-11-			0-C30568	-5	-5	-5	16	-20	-15	5	-10	-15	1	21				
08-37.2847-103.8469-2-15-			0-C30569	-5	-5	-5	20	-20	-15	24	-10	-15	2	30				
08-37.3075-103.8456-2-11-			0-C30571	-5	-5	-5	10	-20	-15	14	-10	-15	2	25				
08-37.3181-103.8414-2-11-			0-C30572	-5	-5	-5	16	-20	-15	24	-10	-15	2	23				
08-37.2953-103.8089-2-12-			0-C30573	-5	-5	-5	-10	-20	-15	24	-10	-15	2	26				
08-37.3356-103.8606-2-11-			0-C30575	-5	-5	-5	-10	-20	-15	8	-10	-15	2	23				
08-37.3494-103.8339-2-12-			0-C30576	-5	-5	-5	21	-20	-15	7	-10	-15	2	21				
08-37.3631-103.8439-2-11-			0-C30578	-5	-5	-5	19	-20	-15	8	-10	-15	2	19				
08-37.3708-103.7847-2-11-			0-C30579	-5	-5	-5	17	-20	-15	26	-10	-15	2	26				
08-37.3344-103.7681-2-12-			0-C30581	-5	-5	-5	28	-20	-15	12	-10	-15	1	25				
08-37.2811-103.7233-2-99-			0-C30586	-5	-5	-5	17	-20	-15	15	-10	-15	1	17				
08-37.2608-103.6425-2-11-			0-C30587	-5	-5	-5	-10	-20	-15	9	-10	-15	1	15				
08-37.3072-103.6342-2-15-			0-C30589	-5	-5	-5	15	-20	-15	19	-10	-15	2	33				
08-37.3575-103.7011-2-11-			0-C30592	-5	-5	-5	14	-20	-15	11	-10	-15	1	17				
08-37.2775-103.5233-2-15-			0-C30597	-5	-5	-5	25	-20	21	14	-10	-15	2	27				
08-37.3467-103.5506-2-11-			0-C30604	-5	-5	-5	23	-20	-15	29	-10	-15	2	21				
08-37.3381-103.5467-2-12-			0-C30605	-5	-5	-5	14	-20	-15	9	-10	-15	2	20				
08-37.2858-103.5861-2-12-			0-C30607	-5	-5	-5	21	-20	-15	25	-10	16	2	27				
08-37.2875-103.5861-2-11-			0-C30608	-5	-5	-5	19	-20	-15	20	-10	-15	1	21				
08-37.3061-103.5922-2-11-			0-C30609	-5	-5	-5	19	-20	22	9	-10	-15	2	25				
08-37.3581-103.6111-2-12-			0-C30611	-5	-5	-5	28	-20	-15	16	-10	-15	2	19				
08-37.3556-103.3900-2-12-			0-C30613	-5	-5	-5	13	-20	-15	17	-10	-15	2	25				
08-37.3025-103.4203-2-12-			0-C30616	-5	-5	-5	24	-20	-15	16	-10	-15	1	28				
08-37.3550-103.4225-2-11-			0-C30622	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	22				
08-37.3156-103.4747-2-11-			0-C30623	-5	-5	-5	19	-20	-15	12	-10	-15	2	29				
08-37.3583-103.4944-2-11-			0-C30625	-5	-5	-5	25	-20	-15	14	-10	-15	1	21				

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS																
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu
08-37.4442-103.3983-2-11-						0-C30507	46430	-0.06	618	20830	59	-59	5.7	24	2.0	3	0.7	11390	8.8	12080	28	0.4
08-37.4161-103.4053-2-11-						0-C30508	46850	-0.05	696	19340	61	-54	7.4	39	2.3	4	0.9	11610	11.8	14650	36	0.4
08-37.3997-103.3867-2-11-						0-C30510	58090	-0.07	240	50890	62	81	8.8	42	3.8	5	0.9	9200	8.0	5071	43	0.5
08-37.4561-103.3878-2-11-						0-C30511	59160	-0.07	282	12000	55	40	6.9	44	3.0	5	0.9	10560	9.1	16230	30	0.4
08-37.4897-103.3647-2-15-						0-C30512	41650	-0.06	372	11650	55	-50	5.7	25	2.2	3	0.8	10570	10.9	12000	32	0.4
08-37.3986-103.3217-2-11-						0-C30514	56260	-0.06	593	14440	73	-62	9.9	46	3.3	5	1.0	15120	11.0	14070	41	0.4
08-37.4094-103.3544-2-11-						0-C30515	49260	-0.07	517	36900	77	-67	6.7	39	3.0	5	0.9	12110	9.4	14880	43	0.4
08-37.4258-103.3642-2-11-						0-C30516	43920	-0.05	259	6054	54	-40	6.4	31	2.3	4	0.7	9439	10.1	11180	30	0.4
08-37.4692-103.3667-2-11-						0-C30517	60590	-0.08	443	9614	66	-61	7.7	41	4.1	4	1.0	15640	9.8	17400	45	0.5
08-37.4944-103.2761-2-11-						0-C30519	42550	-0.05	331	6802	54	-43	7.0	32	2.3	5	1.0	11210	11.7	9937	34	0.4
08-37.4581-103.2800-2-12-						0-C30520	74010	-0.08	526	23060	96	-75	11.0	52	3.6	7	1.4	16390	8.3	15480	52	0.6
08-37.4342-103.2636-2-15-						0-C30522	64780	-0.08	678	14110	75	-81	8.8	42	4.0	4	1.1	16860	7.5	20100	39	0.5
08-37.4183-103.3108-2-12-						0-C30525	53390	-0.06	538	15060	70	-64	9.7	44	3.4	5	1.0	15420	10.4	13640	35	0.4
08-37.4136-103.2994-2-11-						0-C30526	43150	-0.05	414	8790	67	-51	6.9	30	2.3	5	0.9	10450	10.7	9289	45	0.4
08-37.4378-103.1764-2-15-						0-C30532	54470	-0.07	508	13150	72	-67	7.4	45	4.0	4	1.0	14010	10.4	15260	37	0.5
08-37.4372-103.1547-2-15-						0-C30533	43860	-0.05	402	7351	58	-46	7.1	35	1.9	4	0.8	11680	9.3	10810	32	0.4
08-37.3981-103.1931-2-15-						0-C30537	53780	-0.06	489	10650	72	-61	7.5	37	3.1	6	1.1	14450	11.7	13300	32	0.4
08-37.4217-103.2053-2-15-						0-C30540	56290	-0.06	637	11860	90	-61	8.6	47	2.5	6	1.1	14700	11.4	15360	38	0.5
08-37.4681-103.1989-2-15-						0-C30541	50730	-0.07	427	16550	76	-68	7.0	36	2.6	5	1.0	14270	11.6	13950	39	0.5
08-37.4606-103.0981-2-15-						0-C30546	54750	-0.05	590	13370	68	-63	8.0	46	3.1	5	1.0	15360	12.3	15160	40	0.5
08-37.4108-103.0808-2-15-						0-C30550	18020	-0.04	199	5934	33	-32	3.6	31	-0.7	3	0.7	5493	19.4	4313	21	0.4
08-37.2925-103.9161-2-15-						0-C30555	67230	-0.07	436	9969	70	-56	6.8	30	3.4	4	1.0	14440	8.1	19060	39	0.5
08-37.3017-103.8867-2-15-						0-C30557	71020	-0.06	644	11540	79	-71	11.6	48	3.2	5	1.2	18340	8.4	17800	45	0.5
08-37.3358-103.9519-2-11-						0-C30565	49450	-0.06	584	4711	58	-59	7.1	31	4.8	5	1.0	33960	13.4	16120	30	0.5
08-37.3417-103.9683-2-11-						0-C30567	59560	-0.04	499	11320	85	-78	10.0	45	3.4	5	1.2	18750	9.1	17800	45	0.5
08-37.3572-103.9947-2-11-						0-C30568	51700	-0.07	553	118100	56	-70	7.6	40	3.4	4	1.1	17080	7.1	13040	37	0.4
08-37.2847-103.8469-2-15-						0-C30569	60620	-0.05	607	10200	70	-65	8.9	39	3.4	5	1.0	15860	9.9	15830	38	0.5
08-37.3075-103.8456-2-11-						0-C30571	63900	-0.06	540	19260	70	-72	7.8	38	3.5	5	1.2	16920	10.2	16470	47	0.5
08-37.3181-103.8414-2-11-						0-C30572	55050	-0.07	561	12080	87	-64	8.9	47	3.2	5	1.3	16100	11.8	14740	48	0.6
08-37.2953-103.8089-2-12-						0-C30573	59670	-0.08	455	16640	72	-72	8.0	34	3.2	4	1.1	15990	10.3	16130	38	0.6
08-37.3356-103.8606-2-11-						0-C30575	61250	-0.06	544	7016	70	-78	10.5	48	3.5	4	1.1	17580	11.0	13990	50	0.5
08-37.3494-103.8339-2-12-						0-C30576	54730	-0.05	459	15960	71	-61	7.7	35	2.4	5	1.0	14120	10.1	12880	35	0.4
08-37.3631-103.8439-2-11-						0-C30578	57500	-0.09	407	14250	74	-66	7.6	46	3.1	5	1.0	15110	12.9	11200	41	0.5
08-37.3708-103.7847-2-11-						0-C30579	68510	-0.09	586	14260	84	-81	9.2	51	2.9	4	1.0	16700	9.8	17720	42	0.5
08-37.3344-103.7681-2-12-						0-C30581	62890	-0.06	579	11850	71	-70	10.6	40	2.4	5	1.0	17100	9.3	18590	44	0.5
08-37.2811-103.7233-2-99-						0-C30586	62450	-0.06	580	8055	79	-64	7.3	49	3.3	6	1.1	14140	11.0	17350	41	0.5
08-37.2608-103.6425-2-11-						0-C30587	59700	-0.09	626	39270	75	181	11.3	57	3.3	5	1.2	15900	8.0	13430	44	0.5
08-37.3072-103.6342-2-15-						0-C30589	76700	-0.10	703	19220	90	-81	9.3	38	4.2	5	1.2	17200	6.2	18280	45	0.6
08-37.3575-103.7011-2-11-						0-C30592	46180	-0.04	325	12600	60	-73	8.7	48	1.9	4	0.9	9541	18.3	6615	25	0.5
08-37.2775-103.5233-2-15-						0-C30597	56820	-0.05	523	10620	82	-67	9.4	44	3.5	6	1.1	19240	8.9	19860	30	0.4
08-37.3467-103.5506-2-11-						0-C30604	65860	-0.08	565	13620	93	-82	10.3	54	3.1	5	1.2	17650	9.4	15180	45	0.5
08-37.3381-103.5467-2-12-						0-C30605	58510	-0.08	450	6903	77	-75	9.8	45	3.0	5	1.3	18120	13.2	16930	40	0.6
08-37.2858-103.5861-2-12-						0-C30607	64190	-0.06	553	11640	84	-71	10.1	51	3.5	6	1.1	17110	11.3	16790	44	0.5
08-37.2875-103.5861-2-11-						0-C30608	66360	-0.07	546	12460	84	-70	9.4	46	3.9	6	1.2	17700	9.6	17530	48	0.5
08-37.3061-103.5922-2-11-						0-C30609	71130	-0.07	490	12840	92	-71	10.0	47	3.9	6	1.1	15820	10.1	12970	53	0.5
08-37.3581-103.6111-2-12-						0-C30611	64900	-0.08	563	10010	79	-80	8.5	42	3.4	5	1.3	18440	10.2	17940	43	0.5
08-37.3556-103.3900-2-12-						0-C30613	62180	-0.06	548	6467	80	-47	8.1	46	3.0	6	1.2	16040	10.7	14260	42	0.5
08-37.3025-103.4208-2-12-						0-C30616	61130	-0.06	537	31650	76	-64	8.1	48	3.2	5	1.1	17370	11.4	13390	44	0.5
08-37.3550-103.4225-2-11-						0-C30622	48480	-0.07	535	22380	54	-51	5.8	27	2.5	4	0.8	11620	8.4	17410	42	0.4
08-37.3156-103.4747-2-11-						0-C30623	56330	-0.06	618	18920	82	-74	11.7	47	3.3	5	1.1	19960	11.1	17200	44	0.1
08-37.3583-103.4944-2-11-						0-C30625	62950	-0.06	572	11570	87	-72	7.9	44	2.8	6	1.2	17270	10.6	18700	43	0.6

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

4

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS (continued)																U/Th RATIO
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Mg	Mn	Na	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	Ti	V	Yb	Zn	
08-37.4442-103.3983-2-11-						0-C30507	9211	311	4868	-22	-2	5.9	3.6	-259	-1		8.3	2238	48	3.9	-66	0.518
08-37.4161-103.4053-2-11-						0-C30508	9201	328	5322	41	-2	6.1	4.3	-227	1	1	9.6	3088	49	3.6	57	0.375
08-37.3997-103.3867-2-11-						0-C30510	5700	80	1947	-21	-2	9.3	5.8	453	-1	-1	11.7	3604	78	4.9	139	1.068
08-37.4561-103.3878-2-11-						0-C30511	9359	103	2572	42	-2	5.4	5.5	-183	-1	-1	9.4	2361	40	3.5	-48	0.532
08-37.4897-103.3647-2-15-						0-C30512	8075	243	3881	-20	-2	5.7	3.5	-227	-1	-1	9.3	2327	47	4.2	62	0.301
08-37.3986-103.3217-2-11-						0-C30514	11960	353	7024	45	-2	7.4	5.2	-247	-1	-1	11.8	3272	69	3.7	74	0.339
08-37.4094-103.3544-2-11-						0-C30515	12590	250	6665	-23	-2	7.0	6.2	358	-1	-1	9.9	3450	83	3.8	108	2.970
08-37.4258-103.3642-2-11-						0-C30516	6495	191	2517	33	-2	5.0	3.8	-187	-1	-1	8.9	2842	41	2.9	78	0.348
08-37.4692-103.3667-2-11-						0-C30517	9523	257	4503	-27	-3	7.8	5.2	-270	-1	-1	12.9	3778	61	4.4		0.442
08-37.4944-103.2761-2-11-						0-C30519	6542	286	3422	39	-1	5.8	4.1	-184	1		9.1	3164	44	3.2	64	0.396
08-37.4581-103.2800-2-12-						0-C30520	12070	460	5817	48	-2	9.8	7.7	-321	-1	-1	15.9	4860	86	5.0	-38	0.365
08-37.4342-103.2636-2-15-						0-C30522	13870	471	7866	43	-2	8.7	5.3	-335	-1	-1	12.7	3495	74	4.1	-36	0.283
08-37.4183-103.3108-2-12-						0-C30525	9016	394	6914	-18	-2	7.6	5.4	304	-1	-1	12.1	3800	72	3.6	71	0.331
08-37.4136-103.2994-2-11-						0-C30526	6222	194	4720	25	-2	5.9	5.5	-187	-1	1	9.0	2703	47	4.0	79	0.589
08-37.4378-103.1764-2-15-						0-C30532	11720	344	6931	-24	-2	7.3	4.7	-275	-1	-1	11.5	3380	60	3.7	100	0.278
08-37.4372-103.1547-2-15-						0-C30533	6723	275	4609	28	-1	5.6	4.1	-185	-1	1	9.4	3341	51	3.7	65	0.319
08-37.3981-103.1931-2-15-						0-C30537	9376	359	7179	45	-2	7.3	5.1	297	-1		11.6	3999	67	3.8	-2	0.328
08-37.4217-103.2053-2-15-						0-C30540	11210	443	6941	35	-2	7.0	6.3	-246	-1		12.7	3637	69	4.8	88	0.283
08-37.4681-103.1989-2-15-						0-C30541	8818	350	7118	-22	-2	6.8	5.3	-267	-1		11.7	3419	63	3.4	-86	0.316
08-37.4606-103.0981-2-15-						0-C30546	11130	392	7577	31	-2	7.2	5.5	-237	-1	-1	11.4	3586	66	4.0	60	0.307
08-37.4108-103.0808-2-15-						0-C30550	2506	121	1806	-11	-1	2.7	2.0	-134			6.8	2262	27	3.0	-22	0.382
08-37.2925-103.9161-2-15-						0-C30555	14590	273	4733	-23	3	7.9	5.8	-249	-1	-1	10.8	3048	58	4.7	-53	0.259
08-37.3017-103.8867-2-15-						0-C30557	15710	524	7966	54	-2	9.1	6.2	-284	-1	-1	12.7	3634	84	4.0	96	0.291
08-37.3358-103.9519-2-11-						0-C30565	6221	111	8655	49	-2	5.9	4.4	200	-1	-1	8.5	3406	52	3.2	67	0.506
08-37.3417-103.9683-2-11-						0-C30567	14810	300	7279	-24	-2	8.4	6.1	-295		-39	13.8	3988	77	6.4	-45	0.274
08-37.3572-103.9947-2-11-						0-C30568	13640	319	4944	59	-2	7.3	3.6	481	-6		10.1	2647	86	3.4	-214	0.465
08-37.2847-103.8469-2-15-						0-C30569	12780	427	8196	41	-2	7.7	4.9	-256	1		12.1	3570	65	4.2	80	0.289
08-37.3075-103.8456-2-11-						0-C30571	12650	459	8345	49	-2	8.3	5.2	-273	-1	-1	12.2	3795	71	4.0	-12	0.303
08-37.3181-103.8414-2-11-						0-C30572	9964	402	6830	-22	-2	8.1	6.1	-250	-1		14.4	3615	70	5.0	128	0.271
08-37.2953-103.8089-2-12-						0-C30573	15250	411	7365	-25	-2	8.2	4.8	-309	-1	-1	12.7	3286	63	5.8	94	0.331
08-37.3356-103.8606-2-11-						0-C30575	12720	1159	5401	56	-2	8.5	6.0	-400	-1	-1	14.3	3322	69	4.0	87	0.280
08-37.3494-103.8339-2-12-						0-C30576	9326	349	6903	40	-2	7.1	4.8	-229	-1	-1	10.8	3858	59	3.4	96	0.324
08-37.3631-103.8439-2-11-						0-C30578	11650	387	6269	34	-3	7.0	5.6	-268	-1	-1	13.6	3405	64	6.0	74	0.287
08-37.3708-103.7847-2-11-						0-C30579	11380	404	7992	-30	-3	9.0	5.6	-327	-1	-1	12.8	4482	69	5.1		0.305
08-37.3344-103.7681-2-12-						0-C30581	12900	503	8334	50	-2	7.8	5.9	-276	-1	-1	12.6	3678	70	4.1	-60	0.270
08-37.2811-103.7233-2-99-						0-C30586	9568	347	7684	37	-2	7.7	5.4	-230	1	-1	12.9	3730	63	4.2	85	0.295
08-37.2608-103.6425-2-11-						0-C30587	11050	249	6145	54	-3	7.9	6.0	-318	-1	-1	12.9	3180	69	3.5	151	0.527
08-37.3072-103.6342-2-15-						0-C30589	13960	358	7274	61	-3	9.6	6.0	-332	-1		13.0	3266	84	3.8	-106	0.362
08-37.3575-103.7011-2-11-						0-C30592	6784	1324	3634	-14	-1	5.9	3.5	-394	-1	-1	11.1	3076	42	3.4	64	0.396
08-37.2775-103.5233-2-15-						0-C30597	15720	529	7545	40	-2	9.1	4.3	-281	-1	-1	13.2	3687	82	3.8	109	0.250
08-37.3467-103.5506-2-11-						0-C30604	13050	492	7550	45	-2	8.6	6.6	-335	-1	-1	15.6	3910	81	5.3	108	0.340
08-37.3381-103.5467-2-12-						0-C30605	9095	447	7231	-28	-3	7.9	5.3	-331	-1	-1	12.0	3070	70	4.9	-78	0.442
08-37.2858-103.5861-2-12-						0-C30607	10420	447	8056	59	-2	8.5	5.5	-279	1	-1	12.9	3937	76	4.1	80	0.326
08-37.2875-103.5861-2-11-						0-C30608	11220	537	6672	47	-2	9.0	7.7	-294	-1	-1	12.6	4118	79	3.5	127	1.381
08-37.3061-103.5922-2-11-						0-C30609	10460	434	5698	-22	-2	9.2	6.8	-303	-1	-1	17.5	4299	83	4.7	112	0.526
08-37.3581-103.6111-2-12-						0-C30611	9645	486	8330	-26	-2	8.9	5.4	-334	-1	-1	14.4	3611	82	5.4	64	0.250
08-37.3556-103.3900-2-12-						0-C30613	9737	154	3794	49	-2	8.2	6.8	-188	-1	-1	13.4	4064	59	4.3	-47	0.373
08-37.3025-103.4208-2-12-						0-C30616	12560	447	5760	-21	-2	8.1	5.5	-270	-1	-1	12.5	3661	77	3.6	97	0.320
08-37.3550-103.4225-2-11-						0-C30622	9399	224	3134	-22	-2	6.0	4.4	-234	-1		8.6	2590	45	3.9	81	0.349
08-37.3156-103.4747-2-11-						0-C30623	14490	508	8114	50	-2	8.8	7.0	-299	-1	-1	13.3	3881	84	2.0	83	0.391
08-37.3583-103.4944-2-11-						0-C30625	13520	420	8004	59	-2	8.5	5.7	-272	1	-1	13.0	4397	77	4.9	94	0.362

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

①

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																				U CONCENTRATION								
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SOLLTLOWMETER (ft./min)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	SEDIMENT SAMPLES ANALYZED BY DELAYED NEUTRON COUNTING (DNC) UNITS IN ppm
							DATE	HOUR																										
08-37.3689-103.4642-2-11-						0-C30626-09/18/77-18-	24-17.5-C-		6.8-	610-					16-1-2-5-9-2-2-1-2-1-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.50	
08-37.3408-103.2975-2-11-						0-C30629-09/17/77-17-	29-18.2-C-		6.6-	620-					6-1-2-6-8-2-3-1-2-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.50	
08-37.3300-103.2967-2-15-						0-C30630-09/17/77-13-	30-		-C-	-					6-1-2-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40
08-37.3017-103.3500-2-15-						0-C30632-09/17/77-15-	31-		-	-					8-1-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20
08-37.2514-103.2658-2-12-						0-C30639-09/22/77-19-	27-		-C-	-					6-1-2-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.90
08-37.3011-103.1681-2-15-						0-C30646-09/20/77-10-	27-		-C-	-					6-1-1-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50
08-37.2536-103.2353-2-99-						0-C30648-09/22/77-19-	27-		-C-	-					5-1-2-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.30
08-37.2953-103.2336-2-99-						0-C30649-10/05/77-11-	13-		-C-	-					5-1-1-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30
08-37.3453-103.2108-2-15-						0-C30652-10/05/77-16-	20-		-C-	-					10-1-6-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30
08-37.3394-103.1464-2-15-						0-C30657-10/05/77-18-	16-		-C-	-					10-1-6-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80
08-37.3036-103.0147-2-12-						0-C30659-09/22/77-10-	21-		-C-	-					9-1-6-6-8-1-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.80
08-37.1592-103.9439-2-12-						0-C30660-07/21/77-10-	20-		-C-	-					6-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60
08-37.1572-103.9494-2-12-						0-C30662-07/21/77-10-	23-		-C-	-					8-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.90
08-37.2439-103.9950-2-11-						0-C30665-07/24/77-	8-26-		-C-	-					5-1-2-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.90
08-37.1981-103.9628-2-12-						0-C30667-07/24/77-	9-28-21.2-C-		7.5-	420-					8-1-2-5-8-1-	-4-3-3-2-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	
08-37.1833-103.9517-2-15-						0-C30668-07/24/77-10-	30-		-C-	-					5-1-2-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70
08-37.2256-103.9353-2-15-						0-C30669-07/24/77-10-	30-		-C-	-					10-1-2-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80
08-37.1586-103.8261-2-12-						0-C30674-07/22/77-13-	27-		-C-	-					13-1-1-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80
08-37.1611-103.8281-2-12-						0-C30675-07/22/77-13-	27-		-C-	-					12-1-1-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.30
08-37.1517-103.7611-2-15-						0-C30678-07/23/77-17-	29-		-C-	-					5-1-2-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60
08-37.2022-103.8306-2-15-						0-C30680-07/24/77-14-	31-		-C-	-					6-1-1-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00
08-37.2411-103.8044-2-15-						0-C30683-08/05/77-15-	30-		-	-					6-1-2-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50
08-37.2283-103.7894-2-15-						0-C30684-08/05/77-15-	29-		-	-					5-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.60
08-37.2167-103.7506-2-15-						0-C30685-08/05/77-16-	28-		-C-	-					6-1-2-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.60
08-37.1725-103.7792-2-11-						0-C30686-08/06/77-14-	33-		-C-	-					10-1-2-5-6-1-2-	-2-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.50	
08-37.1781-103.7536-2-12-						0-C30687-08/06/77-15-	33-		-C-	-					6-1-2-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00
08-37.1544-103.7347-2-12-						0-C30690-07/23/77-18-	29-		-C-	-					7-1-2-3-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20
08-37.1947-103.7064-2-12-						0-C30691-08/06/77-	9-25-		-C-	-					6-1-2-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60
08-37.1875-103.6872-2-12-						0-C30692-08/06/77-	9-26-		-C-	-					6-1-2-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.70
08-37.2222-103.6572-2-15-						0-C30695-08/06/77-11-	30-		-C-	-					5-1-2-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80
08-37.1925-103.7289-2-15-						0-C30698-08/06/77-16-	30-		-C-	-					4-1-2-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.90
08-37.1944-103.7261-2-12-						0-C30699-08/06/77-16-	30-		-C-	-					10-1-2-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60
08-37.2283-103.7294-2-12-						0-C30700-08/06/77-16-	29-		-C-	-					5-1-6-7-9-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80
08-37.2211-103.7400-2-11-						0-C30701-08/06/77-17-	29-27.5-C-		8.2-	200-					4-1-2-4-6-1-2-1-2-1-2-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.40	
08-37.1503-103.5122-2-11-						0-C30702-07/27/77-	9-28-14.6-C-		7.6-	420-					8-1-2-7-6-2-3-1-	-3-4-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80	
08-37.1425-103.5025-2-12-						0-C30703-07/27/77-10-	29-		-C-	-					8-1-6-4-6-	-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40
08-37.1503-103.5400-2-12-						0-C30705-07/27/77-11-	29-		-C-	-					5-1-1-4-8-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70
08-37.1703-103.5083-2-11-						0-C30707-07/28/77-18-	28-15.5-C-		7.6-	400-					9-1-1-5-3-2-2-5-	-4-4-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.30	
08-37.2056-103.6236-2-15-						0-C30709-08/07/77-10-	29-		-C-	-					5-1-2-4-6-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20
08-37.1600-103.6086-2-15-						0-C30710-08/07/77-11-	30-		-	-					4-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.90
08-37.1619-103.6075-2-11-						0-C30711-08/07/77-12-	30-20.5-C-		7.4-	500-					5-1-1-4-6-1-2-5-2-1-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
08-37.2417-103.5569-2-15-						0-C30713-08/07/77-13-	32-		-C-	-					5-1-1-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30
08-37.2447-103.6175-2-15-						0-C30714-08/07/77-17-	30-		-C-	-					6-1-2-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50
08-37.2486-103.4550-2-15-						0-C30720-09/13/77-14-	24-		-C-	-					8-1-1-7-6-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00
08-37.1483-103.4636-2-15-						0-C30724-09/19/77-11-	22-		-C-	-					5-1-2-7-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40
08-37.1319																																		

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE									ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY		
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)									Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li
08-37.3689-103.4642-2-11-			0-C30626	-5	-5	-5	11	-20	-15	26	-10	-15	3	34			
08-37.3408-103.2975-2-11-			0-C30629	-5	-5	-5	18	-20	-15	16	-10	-15	2	36			
08-37.3300-103.2967-2-15-			0-C30630	-5	-5	-5	19	-20	-15	20	-10	-15	2	25			
08-37.3017-103.3500-2-15-			0-C30632	-5	-5	-5	32	-20	-15	14	-10	-15	2	27			
08-37.2514-103.2658-2-12-			0-C30639	-5	-5	-5	15	-20	-15	6	-10	-15	1	29			
08-37.3011-103.1681-2-15-			0-C30646	-5	-5	-5	17	-20	15	5	-10	-15	1	21			
08-37.2536-103.2353-2-99-			0-C30648	-5	-5	-5	15	-20	-15	16	-10	-15	1	21			
08-37.2953-103.2336-2-99-			0-C30649	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	19			
08-37.3453-103.2108-2-15-			0-C30652	-5	-5	-5	37	-20	15	15	-10	-15	1	16			
08-37.3394-103.1464-2-15-			0-C30657	-5	-5	-5	22	-20	-15	17	-10	-15	2	32			
08-37.3036-103.0147-2-12-			0-C30659	-5	-5	-5	26	-20	-15	6	-10	-15	2	29			
08-37.1592-103.9439-2-12-			0-C30660	-5	-5	-5	18	-20	-15	13	-10	-15	2	26			
08-37.1572-103.9494-2-12-			0-C30662	-5	-5	-5	-10	-20	-15	20	-10	-15	1	21			
08-37.2439-103.9950-2-11-			0-C30665	-5	-5	-5	-10	-20	-15	11	-10	-15	1	28			
08-37.1981-103.9628-2-12-			0-C30667	-5	-5	-5	-10	-20	-15	14	-10	-15	2	24			
08-37.1833-103.9517-2-15-			0-C30668	-5	-5	-5	10	-20	-15	16	-10	-15	2	31			
08-37.2256-103.9353-2-15-			0-C30669	-5	-5	-5	22	-20	-15	20	-10	-15	2	32			
08-37.1586-103.8261-2-12-			0-C30674	-5	-5	-5	25	-20	18	17	-10	-15	2	37			
08-37.1611-103.8281-2-12-			0-C30675	-5	-5	-5	23	-20	-15	24	-10	-15	2	29			
08-37.1517-103.7611-2-15-			0-C30678	-5	-5	-5	-10	-20	-15	9	-10	-15	2	22			
08-37.2022-103.8306-2-15-			0-C30680	-5	-5	-5	13	-20	-15	8	-10	-15	2	36			
08-37.2411-103.8044-2-15-			0-C30683	-5	-5	-5	20	-20	-15	20	-10	18	2	29			
08-37.2283-103.7894-2-15-			0-C30684	-5	-5	-5	14	-20	15	21	-10	-15	2	43			
08-37.2167-103.7506-2-15-			0-C30685	-5	-5	-5	29	-20	-15	20	-10	-15	2	38			
08-37.1725-103.7792-2-11-			0-C30686	-5	-5	-5	36	-20	-15	16	-10	-15	2	26			
08-37.1781-103.7536-2-12-			0-C30687	-5	-5	-5	21	-20	16	11	-10	-15	2	24			
08-37.1544-103.7347-2-12-			0-C30690	-5	-5	-5	22	-20	19	8	-10	-15	1	20			
08-37.1947-103.7064-2-12-			0-C30691	-5	-5	-5	19	-20	15	11	-10	-15	2	28			
08-37.1875-103.6872-2-12-			0-C30692	-5	-5	-5	19	-20	-15	11	-10	16	2	50			
08-37.2222-103.6572-2-15-			0-C30695	-5	-5	-5	-10	-20	-15	13	-10	-15	1	20			
08-37.1925-103.7289-2-15-			0-C30698	-5	-5	-5	10	-20	19	6	-10	-15	1	28			
08-37.1944-103.7261-2-12-			0-C30699	-5	-5	-5	16	-20	19	9	-10	-15	2	24			
08-37.2283-103.7294-2-12-			0-C30700	-5	-5	-5	-10	-20	20	10	-10	-15	2	27			
08-37.2211-103.7400-2-11-			0-C30701	-5	-5	-5	24	-20	-15	35	-10	-15	2	34			
08-37.1503-103.5122-2-11-			0-C30702	-5	-5	-5	24	-20	15	13	-10	19	2	30			
08-37.1425-103.5025-2-12-			0-C30703	-5	-5	-5	34	-20	-15	13	-10	-15	2	26			
08-37.1503-103.5400-2-12-			0-C30705	-5	-5	-5	20	-20	16	25	-10	-15	2	17			
08-37.1703-103.5083-2-11-			0-C30707	-5	-5	-5	18	-20	-15	-5	-10	-15	1	19			
08-37.2056-103.6236-2-15-			0-C30709	-5	-5	-5	23	-20	-15	18	-10	-15	1	24			
08-37.1600-103.6086-2-15-			0-C30710	-5	-5	-5	15	-20	23	13	-10	-15	1	19			
08-37.1619-103.6075-2-11-			0-C30711	-5	-5	-5	19	-20	-15	13	-10	-15	2	22			
08-37.2417-103.5569-2-15-			0-C30713	-5	-5	-5	16	-20	-15	20	-10	-15	2	28			
08-37.2447-103.6175-2-15-			0-C30714	-5	-5	-5	17	-20	-15	23	-10	-15	1	18			
08-37.2486-103.4550-2-15-			0-C30720	-5	-5	-5	22	-20	23	10	-10	-15	2	21			
08-37.1483-103.4636-2-15-			0-C30724	-5	-5	-5	31	-20	19	6	-10	-15	1	27			
08-37.1319-103.4400-2-12-			0-C30725	-5	-5	-5	20	-20	33	15	-10	-15	2	20			
08-37.1333-103.4042-2-15-			0-C30728	-5	-5	-5	22	-20	-15	18	-10	-15	2	23			
08-37.1417-103.0953-2-11-			0-C30729														
08-37.1639-103.3600-2-15-			0-C30734	-5	-5	-5	11	-20	-15	11	-10	-15	2	19			
08-37.1333-103.3683-2-15-			0-C30735	-5	-5	-5	10	-20	-15	11	-10	-15	2	22			
08-37.1361-103.3317-2-12-			0-C30738	-5	-5	-5	-10	-20	-15	11	-10	-15	2	20			

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS																
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu
08-37.3689-103.4642-2-11-			0-C30626			111200	-7.28	370	5621	94	-44	6.0	49	3.6	7	1.1	10670	11.8	5437	54	0.6	
08-37.3408-103.2975-2-11-			0-C30629			54750	-0.09	513	28570	73	-81	8.6	35	-1.8	5	0.9	16760	11.1	16790	51	0.5	
08-37.3300-103.2967-2-15-			0-C30630			57710	-7.06	585	7894	75	-65	9.8	44	3.2	5	1.1	16180	11.6	17680	39	0.6	
08-37.3017-103.3500-2-15-			0-C30632			77220	-0.07	663	10050	84	-73	9.7	42	4.1	6	1.2	20750	6.4	21020	42	0.4	
08-37.2514-103.2658-2-12-			0-C30639			61300	-0.07	606	31910	95	133	9.3	49	3.1	6	1.3	16500	11.0	15000	52	0.6	
08-37.3011-103.1681-2-15-			0-C30646			53360	-7.77	704	71620	53	-84	6.1	40	2.7	3	1.2	13430	9.4	20310	31	0.5	
08-37.2536-103.2353-2-99-			0-C30648			54020	-0.06	471	7698	75	-55	9.0	39	3.1	5	1.0	12870	11.7	13400	40	0.5	
08-37.2953-103.2336-2-99-			0-C30649			50760	-0.06	483	18740	72	75	6.1	41	3.1	5	0.9	12090	11.0	12980	37	0.5	
08-37.3453-103.2108-2-15-			0-C30652			58260	-0.08	829	28690	85	-83	10.2	46	4.0	5	1.2	18690	6.8	19520	46	0.5	
08-37.3394-103.1464-2-15-			0-C30657			64670	-0.09	688	18600	89	-90	8.3	44	2.9	5	1.1	22150	12.0	24150	40	0.8	
08-37.3036-103.0147-2-12-			0-C30659			66680	-0.07	667	8217	83	-81	11.2	46	3.7	6	1.2	17860	11.3	20480	48	0.6	
08-37.1592-103.9439-2-12-			0-C30660			65740	-0.06	591	13230	76	-68	8.5	38	4.0	5	1.1	16230	9.0	19510	41	0.5	
08-37.1572-103.9494-2-12-			0-C30662			56260	-0.09	580	33530	75	-76	8.8	55	2.6	5	1.2	15240	14.0	14640	41	0.6	
08-37.2439-103.9950-2-11-			0-C30665			50310	-0.07	553	33620	68	-76	8.4	51	3.1	4	1.0	17130	16.3	13070	44	0.6	
08-37.1981-103.9628-2-12-			0-C30667			61370	-0.06	606	29680	68	92	9.9	45	3.0	5	1.1	15780	9.9	18950	45	0.4	
08-37.1833-103.9517-2-15-			0-C30668			57510	-0.05	530	14280	69	-61	7.6	41	2.8	5	1.0	15340	11.8	13860	41	0.5	
08-37.2256-103.9353-2-15-			0-C30669			72940	-0.77	806	15300	82	-76	10.6	39	4.1	6	1.2	16990	8.1	18140	49	0.6	
08-37.1586-103.8261-2-12-			0-C30674			72350	-0.08	588	28520	70	-75	9.0	56	4.9	3	1.1	17290	5.6	20990	38	0.4	
08-37.1611-103.8281-2-12-			0-C30675			78860	-0.77	533	31310	74	-62	11.4	48	5.0	5	1.1	19600	7.1	17090	38	0.5	
08-37.1517-103.7611-2-15-			0-C30678			57810	-0.06	607	42040	66	112	8.1	43	3.4	5	1.1	16100	10.0	14170	38	0.4	
08-37.2022-103.8306-2-15-			0-C30680			66570	-0.06	622	28590	69	-73	7.4	40	3.2	5	1.1	15510	10.3	20220	42	0.5	
08-37.2411-103.9044-2-15-			0-C30683			66350	-0.09	673	38690	69	-86	10.3	55	4.2	4	1.2	18730	6.7	19630	46	0.5	
08-37.2283-103.7894-2-15-			0-C30684			71800	-0.06	648	27000	74	-59	10.0	49	4.1	6	1.1	18910	10.1	18500	38	0.5	
08-37.2167-103.7506-2-15-			0-C30685			71400	-0.06	599	22840	79	-59	8.0	50	4.4	5	1.1	18840	8.3	17120	42	0.5	
08-37.1725-103.7792-2-11-			0-C30686			75860	-0.08	590	56390	87	-66	10.3	67	5.1	5	1.2	20080	8.1	16220	41	0.5	
08-37.1781-103.7536-2-12-			0-C30687			62510	-0.08	543	42640	72	-73	8.5	42	4.5	4	0.9	18350	7.0	15860	37	0.4	
08-37.1544-103.7347-2-12-			0-C30690			52950	-0.06	439	83880	66	161	10.5	44	3.1	5	1.0	16690	7.8	14840	42	0.5	
08-37.1947-103.7064-2-12-			0-C30691			60330	-0.06	547	44640	64	-64	8.5	47	3.2	5	0.9	15620	8.2	15390	31	0.4	
08-37.1875-103.6872-2-12-			0-C30692			69090	-0.08	418	49130	89	-75	11.0	54	4.3	5	1.0	19090	9.0	16850	46	0.4	
08-37.2222-103.6572-2-15-			0-C30695			54010	-0.07	512	18010	69	-79	8.2	49	-1.6	5	1.1	15950	12.9	15230	41	0.5	
08-37.1925-103.7289-2-15-			0-C30698			56880	-0.06	477	47210	68	-64	9.3	48	3.7	5	1.0	17890	10.6	14670	30	0.5	
08-37.1944-103.7261-2-12-			0-C30699			65130	-0.06	544	27750	76	-66	8.5	46	3.8	5	1.0	17180	8.5	16800	42	0.5	
08-37.2283-103.7294-2-12-			0-C30700			56750	-0.77	541	58860	76	113	8.6	51	2.4	5	1.0	15530	9.5	16260	31	0.6	
08-37.2211-103.7400-2-11-			0-C30701			77810	-0.10	423	6942	142	-68	11.3	58	5.4	6	1.5	23130	7.2	14620	78	0.5	
08-37.1503-103.5122-2-11-			0-C30702			62560	-0.06	861	26620	77	-83	11.9	60	3.5	6	1.2	21460	11.1	20530	46	0.6	
08-37.1425-103.5025-2-12-			0-C30703			71320	-0.07	898	18450	82	-83	12.5	59	3.2	6	1.3	23330	8.9	18390	44	0.5	
08-37.1503-103.5400-2-12-			0-C30705			64630	-0.07	845	15570	95	-92	12.9	75	3.2	5	1.1	21690	10.5	17270	50	0.6	
08-37.1703-103.5083-2-11-			0-C30707			47190	-0.08	733	82260	60	-90	6.4	44	-1.6	4	1.0	12450	10.6	14590	36	0.5	
08-37.2056-103.6236-2-15-			0-C30709			64170	-0.06	589	51380	70	-76	10.8	64	3.3	5	1.0	22150	10.4	21120	33	0.5	
08-37.1500-103.6086-2-15-			0-C30710			63230	-0.06	698	19040	62	-78	9.8	62	2.9	5	1.1	18740	8.7	20680	38	0.5	
08-37.1619-103.6075-2-11-			0-C30711			65120	-0.13	647	22370	75	-91	12.0	79	-2.1	5	1.5	23750	13.0	18460	42	0.4	
08-37.2417-103.5569-2-15-			0-C30713			76540	-0.09	634	16040	80	-78	10.6	50	3.6	4	1.1	23050	7.0	22280	51	0.5	
08-37.2447-103.6175-2-15-			0-C30714			58270	-0.06	511	14330	72	-62	9.0	47	2.9	5	1.0	15070	10.5	13310	39	0.5	
08-37.2486-103.4550-2-15-			0-C30720			64730	-0.07	510	62690	76	-76	9.1	40	3.9	5	1.0	17060	7.0	17300	44	0.4	
08-37.1483-103.4636-2-15-			0-C30724			62790	-0.07	772	42170	80	-88	10.3	65	2.7	5	1.2	18810	10.4	19920	41	0.6	
08-37.1319-103.4400-2-12-			0-C30725			55120	-0.09	610	19020	85	-100	12.3	62	3.3	5	1.5	20880	9.3	17720	43	0.6	
08-37.1333-103.4042-2-15-			0-C30728			69990	-0.06	677	14380	77	-73	10.9	50	3.5	5	1.1	19670	8.4	20090	43	0.5	
08-37.1417-103.0953-2-11-			0-C30729			50550	-0.06	421	9549	71	-59	8.8	45	2.8	5	1.0	13830	10.9	11210	43	0.5	
08-37.1639-103.3600-2-15-			0-C30734			62330	-0.07	635	17540	87	-81	9.0	58	3.0	5	1.0	16460	10.3	15360	47	0.6	
08-37.1333-103.3683-2-15-			0-C30735			57430	-0.08	596	16940	72	-82	7.3	45	4.2	4	1.3	16640	11.8	16610	41	0.6	
08-37.1361-103.3317-2-12-			0-C30738			53340	-0.06	602	43770	76	-81	10.8	58	2.7	5	1.0	18640	13.7	16120	41	0.6	

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

4

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS (continued)													U/Th RATIO			
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Mg	Mn	Na	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	Ti	V	Yb	Zn	
08-37.3689-103.4642-2-11-	0-C30626	5656	103	2018	-19	3	10.8	6.8	-138	1	1	27.7	5620	78	5.7	-80	0.343					
08-37.3408-103.2975-2-11-	0-C30629	13110	327	7695	52	-3	7.5	8.7	-326	-1	-1	11.1	3704	75	-1.8	103	1.667					
08-37.3300-103.2967-2-15-	0-C30630	9934	407	7797	-17	-2	7.6	5.4	-256	-1	-1	12.6	3893	75	4.1	75	0.270					
08-37.3017-103.3500-2-15-	0-C30632	14010	439	7944	59	-2	10.2	6.2	-292	-1	-1	15.4	4413	90	4.5	88	0.273					
08-37.2514-103.2658-2-12-	0-C30639	11640	454	7306	46	-2	7.4	7.5	-308	-1	-1	14.4	3412	74	4.9	-57	0.687					
08-37.3011-103.1681-2-15-	0-C30646	7122	335	10320	48	-2	6.0	3.7	-298	-1	-1	8.8	2803	79	3.5	90	0.398					
08-37.2536-103.2353-2-99-	0-C30648	2887	211	5594	41	-2	7.1	5.3	-208	1		10.9	3663	65	3.6	74	0.394					
08-37.2953-103.2336-2-99-	0-C30649	8607	308	4967	43	-2	7.0	4.7	-215	-1		11.0	3774	60	3.2	67	0.300					
08-37.3453-103.2108-2-15-	0-C30652	15250	538	6971	57	-2	8.8	7.4	-349	-1		12.4	3619	96	4.9	126	0.266					
08-37.3394-103.1464-2-15-	0-C30657	10190	617	9606	48	-3	8.6	6.6	-377	-1	-1	14.3	5531	94	5.1	120	0.266					
08-37.3036-103.0147-2-12-	0-C30659	13380	417	9383	54	-2	8.6	6.6	-296	-1	-1	14.2	4415	80	4.3	-59	0.338					
08-37.1592-103.9439-2-12-	0-C30660	14170	451	8322	39	-2	8.2	5.2	-260	-1	-1	11.6	4013	74	3.8	83	0.310					
08-37.1572-103.9494-2-12-	0-C30662	10030	372	8191	51	-3	6.5	6.1	-288	-1	-1	11.3	3271	57	3.9	134	0.345					
08-37.2439-103.9950-2-11-	0-C30665	9747	395	7873	-25	-2	6.9	5.0	-295	-1		10.1	3652	71	4.3	79	0.386					
08-37.1991-103.9628-2-12-	0-C30667	11110	433	8920	39	-2	7.7	5.4	394	-1		12.1	4020	67	3.5	76	0.306					
08-37.1833-103.9517-2-15-	0-C30668	8575	370	7540	37	-2	7.5	4.9	-227	-1	-1	12.6	3606	66	3.8	88	0.294					
08-37.2256-103.9353-2-15-	0-C30669	14350	426	7984	58	-2	8.8	6.4	-304	1		14.2	4118	69	4.5	119	0.268					
08-37.1586-103.8261-2-12-	0-C30674	14370	442	7535	-27	-3	8.8	4.5	-325	-1	-1	12.6	3008	91	2.7	106	0.302					
08-37.1611-103.8281-2-12-	0-C30675	16620	442	5646	54	-2	10.1	5.4	-267	-1	-1	13.8	4379	98	3.6	110	0.312					
08-37.1517-103.7611-2-15-	0-C30678	10980	341	7947	44	-2	7.5	4.8	434	-1	-1	9.7	3671	67	3.2	-68	0.371					
08-37.2022-103.8306-2-15-	0-C30680	10570	357	8346	50	-2	7.6	6.5	-265	-1	-1	11.8	3411	75	5.0	-30	0.339					
08-37.2411-103.8044-2-15-	0-C30683	14830	453	8432	-29	-3	8.7	4.2	-350	-1	-1	11.2	3703	88	3.6	148	0.313					
08-37.2283-103.7894-2-15-	0-C30684	11050	433	6198	38	-2	8.9	6.3	280	-1	-1	13.7	3699	86	4.6	88	0.336					
08-37.2167-103.7506-2-15-	0-C30685	15910	370	5837	59	-2	9.2	5.8	-237	-1	-1	15.3	3701	78	4.2	115	0.301					
08-37.1725-103.7792-2-11-	0-C30686	15440	331	3041	59	-2	9.4	6.2	448	-1	-1	16.9	3864	86	5.5	147	0.325					
08-37.1781-103.7536-2-12-	0-C30687	12650	406	6231	42	-2	8.2	3.9	-309	-1	-2	12.0	2961	82	4.4		0.333					
08-37.1544-103.7347-2-12-	0-C30690	12330	431	7608	39	-2	7.4	5.2	710	-1	1	9.6	3771	84	3.3	83	0.438					
08-37.1947-103.7064-2-12-	0-C30691	12180	387	6544	47	-2	8.0	4.8	-240	-1	-1	11.2	3391	80	4.0	108	0.321					
08-37.1875-103.6872-2-12-	0-C30692	21750	590	4283	46	-2	9.1	5.5	-349	-1	-1	14.2	3700	91	3.9	124	0.401					
08-37.2222-103.6572-2-15-	0-C30695	2476	386	9092	-24	-2	7.0	6.0	-311	-1		11.5	3661	67	4.4	-100	0.330					
08-37.1925-103.7289-2-15-	0-C30698	10630	435	6435	33	-2	7.5	5.9	340	-1	-1	12.2	3706	80	4.3	88	0.320					
08-37.1944-103.7261-2-12-	0-C30699	13510	449	7012	42	-2	8.6	5.3	-257	1		13.2	3698	79	4.4	92	0.273					
08-37.2283-103.7294-2-12-	0-C30700	13150	386	7607	34	-2	6.9	5.4	350	-1	-1	11.1	3846	64	4.1	125	0.342					
08-37.2211-103.7400-2-11-	0-C30701	14320	242	4776	-33	-3	9.7	8.4	-330	-1	-1	14.5	3327	92	5.4	157	0.441					
08-37.1503-103.5122-2-11-	0-C30702	15370	598	10380	50	-2	8.7	6.6	-319	-1	-1	11.4	4697	92	4.2	-47	0.333					
08-37.1425-103.5025-2-12-	0-C30703	14760	609	10390	56	-2	10.1	5.8	-327	-1		12.5	4552	93	4.1	77	0.272					
08-37.1503-103.5400-2-12-	0-C30705	16020	682	9815	48	-2	9.1	6.1	-372	-1	-1	11.9	4465	87	4.5	95	0.311					
08-37.1703-103.5083-2-11-	0-C30707	10050	248	10320	46	-2	6.0	4.4	587	-1		7.8	3571	74	3.7	79	0.551					
08-37.2056-103.6236-2-15-	0-C30709	15650	560	8902	39	-2	8.8	6.1	434	-1	-1	11.2	5053	102	3.7	80	0.375					
08-37.1600-103.6086-2-15-	0-C30710	11360	532	11740	44	-2	8.0	5.1	-272	-1	-1	9.4	4098	76	3.3	70	0.309					
08-37.1619-103.6075-2-11-	0-C30711	14570	548	10950	-36	-4	8.8	6.7	-349	-1	-1	11.0	5292	101	3.6	-85	0.318					
08-37.2417-103.5569-2-15-	0-C30713	16530	552	7316	67	-3	10.9	5.9	-349	-1	-1	15.4	4287	92	4.3	-51	0.214					
08-37.2447-103.6175-2-15-	0-C30714	12090	371	6371	36	-2	7.8	5.2	-241	1		12.4	4186	65	4.2	-48	0.282					
08-37.2436-103.4550-2-15-	0-C30720	17250	524	6810	47	-2	8.5	5.2	-294	-1	-1	11.0	3466	96	3.8	102	0.364					
08-37.1483-103.4636-2-15-	0-C30724	16810	483	10090	64	-2	8.2	6.5	571	-1		12.8	4724	96	4.5	125	0.266					
08-37.1319-103.4400-2-12-	0-C30725	14980	798	10580	-31	-3	9.5	6.7	-437	-1	-1	12.0	4078	88	4.7	-14	0.358					
08-37.1333-103.4042-2-15-	0-C30723	13640	493	8870	55	-2	9.2	5.9	-285	-1	1	12.4	4117	84	3.8	84	0.266					
08-37.1417-103.0953-2-11-	0-C30729	9060	394	5061	36	-2	7.0	6.1	-249	-1	-1	10.4	4083	64	3.6	128	0.904					
08-37.1539-103.3600-2-15-	0-C30734	10420	459	9547	59	-2	7.4	5.8	-321	-1	-1	12.4	3874	75	5.4	77	0.266					
08-37.1333-103.3683-2-15-	0-C30735	13320	372	9099	54	-2	7.8	4.5	-324	-1	-1	11.4	4207	67	3.2		0.368					
08-37.1361-103.3317-2-12-	0-C30738	12080	769	7895	43	-2	7.8	5.8	-349	1	-1	11.6	4307	81	5.1	76	1.034					

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

①

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																				U CONCENTRATION									
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SOLITOMETER (mL/ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	SEDIMENT SAMPLES ANALYZED BY DELAYED NEUTRON COUNTING (DNC)	UNITS IN ppm
							DATE	HOUR																											
08-37.1314-103.2669-2-15-						0-C30740-09/20/77-19-	25-		-C-	-	-	-	-	-	10-1-2-7-6-	-1-	-2-1-2-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30	
08-37.1986-103.2533-2-15-						0-C30741-09/22/77-16-	28-		-C-	-	-	-	-	-	5-1-2-7-6-	-1-	-2-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20
08-37.2106-103.2831-2-11-						0-C30742-09/22/77-17-	28-		-C-	-	-	-	-	-	5-1-1-7-6-	-1-	-2-1-2-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.60
08-37.2086-103.1683-2-15-						0-C30749-09/22/77-14-	31-		-C-	-	-	-	-	-	5-1-6-	-6-	-1-	-2-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60
08-37.1758-103.1342-2-15-						0-C30756-10/04/77-19-	24-		-C-	-	-	-	-	-	6-1-2-7-6-	-1-	-1-3-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.70
08-37.1747-103.1536-2-12-						0-C30757-10/05/77-10-	8-11.8-C-		6.1-	325-					4-1-2-5-6-1-2-2-	-1-	-1-2-3-4-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.00	
08-37.1250-103.1706-2-12-						0-C30758-10/05/77-10-	8-15.2-C-		7.0-	625-					5-1-2-4-9-3-3-1-	-2-	-4-3-3-4-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.10	
08-37.1553-103.1825-2-15-						0-C30759-10/05/77-11-	9-		-C-	-	-	-	-	-	7-1-2-4-6-	-1-	-2-4-3-3-4-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00
08-37.1358-103.0164-2-12-						0-C30762-10/04/77-13-	26-20.0-C-		7.8-	575-					7-1-5-4-6-2-3-1-	-2-	-4-3-4-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.10	
08-37.1661-103.0314-2-12-						0-C30765-10/04/77-16-	27-22.0-C-		7.8-	485-					7-1-1-4-6-2-3-1-	-2-	-4-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.00	
08-37.1642-103.0336-2-11-						0-C30766-10/04/77-17-	26-16.0-C-		7.2-	355-					15-1-1-4-6-3-3-1-	-3-	-4-3-3-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00	
08-37.1492-103.0364-2-11-						0-C30767-10/05/77-12-	14-18.0-C-		7.1-	345-					11-1-3-4-6-2-3-1-	-2-	-1-2-3-3-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.60	
08-37.1792-103.0419-2-11-						0-C30768-10/05/77-13-	20-16.0-C-		7.1-	625-					13-1-2-4-5-2-3-1-	-2-	-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.90	
08-37.1933-103.0697-2-15-						0-C30770-10/05/77-15-	18-		-C-	-	-	-	-	-	11-1-3-4-6-	-1-	-2-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.90	
08-37.1978-103.0383-2-11-						0-C30772-10/05/77-17-	14-16.0-C-		7.1-	775-					9-1-4-4-7-2-3-1-	-2-	-4-3-3-3-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.90	
08-37.1344-103.0861-2-12-						0-C30775-10/05/77-19-	13-14.0-C-		7.6-	430-					11-1-3-4-6-3-3-1-	-2-	-4-3-4-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80	
08-37.1114-103.9364-2-12-						0-C30777-07/21/77-12-	26-		-C-	-	-	-	-	-	8-1-1-7-6-	-1-	-2-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	
08-37.0564-103.9161-2-12-						0-C30782-07/21/77-16-	24-		-C-	-	-	-	-	-	6-1-1-4-6-2-4-4-	-2-	-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
08-37.0047-103.9944-2-12-						0-C30784-07/22/77-9-	21-14.5-C-		7.2-	1550-					9-1-7-4-6-2-3-1-	-2-	-4-4-4-2-	-9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.90	
08-37.0586-103.9850-2-12-						0-C30788-07/22/77-11-	28-		-C-	-	-	-	-	-	6-1-1-4-6-	-1-	-2-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.10	
08-37.0011-103.7661-2-12-						0-C30796-07/23/77-11-	27-		-C-	-	-	-	-	-	7-1-2-4-6-	-1-	-2-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
08-37.0994-103.7711-2-15-						0-C30801-07/23/77-14-	34-		-C-	-	-	-	-	-	5-1-1-7-6-	-1-	-2-3-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
08-37.1239-103.7797-2-12-						0-C30804-07/23/77-16-	29-		-C-	-	-	-	-	-	8-1-1-7-6-	-1-	-2-4-4-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
08-37.0108-103.6511-2-15-						0-C30807-07/25/77-11-	29-		-	-	-	-	-	-	8-1-1-4-6-	-1-	-2-4-4-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30	
08-37.0144-103.6472-2-12-						0-C30808-07/25/77-12-	29-		-C-	-	-	-	-	-	8-1-1-4-6-	-1-	-2-4-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
08-37.0750-103.6994-2-12-						0-C30812-07/25/77-14-	27-		-C-	-	-	-	-	-	8-1-2-4-6-	-1-	-2-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.60	
08-37.0728-103.6914-2-11-						0-C30813-07/25/77-15-	27-		-C-	-	-	-	-	-	6-1-2-4-6-	-1-	-2-3-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.60	
08-37.0544-103.6764-2-12-						0-C30814-07/25/77-15-	27-		-C-	-	-	-	-	-	5-1-1-7-8-	-1-	-2-3-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.70	
08-37.0558-103.6739-2-12-						0-C30815-07/25/77-15-	27-		-C-	-	-	-	-	-	8-1-1-4-6-	-1-	-2-3-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.20	
08-37.0914-103.6881-2-11-						0-C30816-07/25/77-16-	27-16.5-C-		7.7-	1400-					6-1-1-5-8-2-2-1-	-4-	-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.80	
08-37.1147-103.7181-2-11-						0-C30817-07/26/77-10-	23-16.5-C-		7.6-	480-					4-1-7-7-8-	-1-	-2-1-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
08-37.1044-103.6631-2-11-						0-C30818-07/26/77-12-	27-21.5-C-		7.8-	400-					3-1-4-6-1-	-1-	-3-1-3-4-2-	-9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.80	
08-37.0553-103.6272-2-12-						0-C30820-07/26/77-14-	28-		-C-	-	-	-	-	-	5-1-2-4-6-	-1-	-2-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.10	
08-37.0456-103.6017-2-15-						0-C30822-07/26/77-15-	31-		-C-	-	-	-	-	-	1-2-4-6-	-1-	-1-3-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30	
08-37.0228-103.5642-2-12-						0-C30824-07/26/77-15-	33-		-C-	-	-	-	-	-	5-1-2-4-6-	-1-	-2-3-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
08-37.0203-103.5642-2-12-						0-C30826-07/26/77-16-	30-		-C-	-	-	-	-	-	4-1-2-4-6-	-1-	-1-4-3-4-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
08-37.0211-103.5536-2-11-						0-C30827-07/26/77-16-	28-26.2-C-		7.9-	800-					5-1-2-5-8-1-1-	-2-	-3-2-3-4-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
08-37.0483-103.5694-2-99-						0-C30828-07/26/77-17-	25-		-C-	-	-	-	-	-	5-1-2-4-7-	-1-	-1-4-3-4-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.50	
08-37.0700-103.5825-2-12-						0-C30829-07/26/77-17-	25-		-C-	-	-	-	-	-	6-1-2-4-6-	-1-	-2-3-3-3-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.80	
08-37.0714-103.5869-2-12-						0-C30830-07/26/77-17-	23-		-C-	-	-	-	-	-	7-1-2-4-6-	-1-	-2-3-3-3-4-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00	
08-37.0744-103.5339-2-12-						0-C30831-07/27/77-14-	29-		-C-	-	-	-	-	-	4-3-8-3-8-2-3-4-	-2-	-1-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.20	
08-37.0733-103.5372-2-12-						0-C30832-07/27/77-14-	29-		-C-	-	-	-	-	-	5-3-8-3-8-	-1-	-2-1-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.10	
08-37.0692-103.5589-2-15-						0-C30834-07/27/77-16-	29-		-C-																										

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

2

DOE SAMPLE NUMBER							ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE									ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LWS SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)									Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li
08-37.1314-103.2667-2-15-						0-C30740	-5	-5	-5	21	-20	-15	9	-10	-15	1	23
08-37.1986-103.2533-2-15-						0-C30741	-5	-5	-5	20	-20	13	13	-10	-15	2	38
08-37.2106-103.2831-2-11-						0-C30742	-5	-5	-5	20	-20	-15	12	-10	-15	2	23
08-37.2086-103.1683-2-15-						0-C30749	-5	-5	-5	-10	-20	-15	16	-10	-15	2	23
08-37.1758-103.1342-2-15-						0-C30756	-5	-5	-5	31	-20	-15	16	-10	-15	2	24
08-37.1747-103.1536-2-12-						0-C30757	-5	-5	-5	19	-20	15	11	-10	-15	1	18
08-37.1250-103.1706-2-12-						0-C30758	-5	-5	-5	16	-20	-15	-5	-10	20	1	11
08-37.1553-103.1925-2-15-						0-C30759	-5	-5	-5	19	-20	-15	14	-10	-15	1	15
08-37.1358-103.0164-2-12-						0-C30762	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	13
08-37.1661-103.0314-2-12-						0-C30765	-5	-5	-5	-10	-20	-15	-5	-10	-15	-1	8
08-37.1642-103.0336-2-11-						0-C30766	-5	-5	-5	-10	-20	-15	-5	-10	-15	-1	9
08-37.1492-103.0364-2-11-						0-C30767	-5	-5	-5	-10	-20	-15	7	-10	-15	-1	8
08-37.1792-103.0419-2-11-						0-C30768	-5	-5	-5	15	-20	-15	-5	-10	-15	1	17
08-37.1933-103.0697-2-15-						0-C30770	-5	-5	-5	16	-20	-15	-5	-10	-15	1	12
08-37.1978-103.0383-2-11-						0-C30772	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	11
08-37.1344-103.0861-2-12-						0-C30775	-5	-5	-5	16	-20	-15	6	-10	15	2	24
08-37.1114-103.9364-2-12-						0-C30777	-5	-5	-5	12	-20	-15	13	-10	-15	2	28
08-37.0564-103.9161-2-12-						0-C30782	-5	-5	-5	-10	-20	-15	9	-10	-15	2	18
08-37.0047-103.9944-2-12-						0-C30784	-5	-5	-5	16	-20	48	6	-10	29	2	19
08-37.0586-103.9850-2-12-						0-C30788	-5	-5	-5	22	-20	15	9	-10	-15	1	26
08-37.0011-103.7661-2-12-						0-C30796	-5	-5	-5	21	-20	-15	8	-10	-15	2	27
08-37.0994-103.7711-2-15-						0-C30801	-5	-5	-5	16	-20	-15	9	-10	-15	2	31
08-37.1239-103.7797-2-12-						0-C30804	-5	-5	-5	22	-20	17	23	-10	-15	1	25
08-37.0108-103.6511-2-15-						0-C30807	-5	-5	-5	-10	-20	-15	6	-10	-15	1	34
08-37.0144-103.6472-2-12-						0-C30808	-5	5	-5	12	-20	-15	5	-10	-15	1	27
08-37.0750-103.6994-2-12-						0-C30812	-5	-5	-5	16	-20	18	20	-10	-15	1	38
08-37.0728-103.6914-2-11-						0-C30813	-5	-5	-5	-10	-20	-15	8	-10	-15	2	29
08-37.0544-103.6764-2-12-						0-C30814	-5	-5	-5	23	-20	-15	19	-10	-15	2	39
08-37.0558-103.6739-2-12-						0-C30815	-5	-5	-5	14	-20	-15	12	-10	-15	2	40
08-37.0914-103.6881-2-11-						0-C30816	-5	-5	-5	34	-20	21	-5	-10	-15	2	28
08-37.1147-103.7181-2-11-						0-C30817	-5	-5	-5	36	-20	49	20	-10	-15	2	15
08-37.1044-103.6631-2-11-						0-C30818	-5	-5	-5	22	-20	-15	-5	-10	23	1	22
08-37.0553-103.6272-2-12-						0-C30820	-5	-5	-5	15	-20	-15	-5	-10	-15	2	32
08-37.0456-103.6017-2-15-						0-C30822	-5	-5	-5	14	-20	22	9	-10	-15	2	20
08-37.0228-103.5642-2-12-						0-C30824	-5	-5	-5	-10	-20	-15	9	-10	-15	2	23
08-37.0203-103.5642-2-12-						0-C30826	-5	-5	-5	10	-20	15	5	-10	-15	1	34
08-37.0211-103.5536-2-11-						0-C30827	-5	5	-5	16	-20	-15	8	-10	-15	2	24
08-37.0483-103.5694-2-99-						0-C30828	-5	-5	-5	11	-20	-15	11	-10	17	2	20
08-37.0700-103.5825-2-12-						0-C30829	-5	-5	-5	16	-20	22	9	-10	-15	2	36
08-37.0714-103.5869-2-12-						0-C30830	-5	-5	-5	23	-20	-15	19	-10	-15	2	22
08-37.0744-103.5339-2-12-						0-C30831	-5	-5	-5	24	20	29	19	-10	-15	1	24
08-37.0733-103.5372-2-12-						0-C30832	-5	-5	-5	34	-20	24	19	-10	-15	1	20
08-37.0692-103.5589-2-15-						0-C30834	-5	-5	-5	28	-20	16	26	-10	-15	1	24
08-37.0053-103.5119-2-11-						0-C30836	-5	-5	-5	16	-20	-15	9	-10	-15	2	22
08-37.0269-103.5264-2-12-						0-C30837	-5	-5	-5	14	-20	-15	10	-10	-15	2	24
08-37.0239-103.5289-2-12-						0-C30838	-5	-5	-5	-10	-20	-15	9	-10	-15	1	20
08-37.0447-103.5450-2-15-						0-C30839	-5	-5	-5	15	-20	-15	11	-10	-15	1	25
08-37.0406-103.5483-2-12-						0-C30840	-5	-5	-5	13	-20	-15	12	-10	-15	2	24
08-37.0256-103.5081-2-12-						0-C30841	-5	-5	-5	-10	-20	19	-5	-10	-15	2	27
08-37.0008-103.4994-2-12-						0-C30844	-5	-5	-5	-10	-20	-15	8	-10	-15	1	20
08-37.0564-103.4681-2-12-						0-C30846	-5	-5	-5	30	-20	33	17	-10	-15	1	15

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS																
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASER SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu
08-37.1314-103.2669-2-15-						0-C30740	66340	-0.06	604	19410	74	-74	9.8	42	3.6	5	1.1	17810	8.0	17950	37	0.4
08-37.1986-103.2533-2-15-						0-C30741	72240	-0.08	679	15250	80	-87	10.7	52	4.3	6	1.3	18290	6.3	20630	43	0.5
08-37.2106-103.2831-2-11-						0-C30742	77940	-0.09	602	24540	85	-93	10.6	59	4.0	5	1.1	20360	7.6	17200	40	0.4
08-37.2086-103.1683-2-15-						0-C30749	62370	-0.06	690	11050	77	-71	9.8	46	3.0	5	1.1	17340	11.3	19100	44	0.5
08-37.1758-103.1342-2-15-						0-C30756	84330	-0.07	640	18470	96	-65	8.7	60	5.7	6	1.1	20400	7.3	17310	54	0.4
08-37.1747-103.1536-2-12-						0-C30757	50250	-0.07	583	9657	98	-80	9.9	50	3.3	5	1.2	17120	11.4	16460	52	0.6
08-37.1250-103.1706-2-12-						0-C30758	36000	-0.08	365	19270	85	-77	7.7	46	-1.5	5	1.0	30790	20.8	11940	25	0.8
08-37.1553-103.1825-2-15-						0-C30759	48580	-0.06	544	9612	78	-66	9.2	59	2.5	5	1.1	26800	18.5	16630	43	0.7
08-37.1358-103.0164-2-12-						0-C30762	42140	-0.04	785	19770	46	-61	5.5	39	1.0	4	0.8	13360	13.3	15130	23	0.5
08-37.1661-103.0314-2-12-						0-C30765	30520	-0.06	295	17680	86	-71	7.7	68	-1.2	5	1.0	37290	33.5	10210	44	1.0
08-37.1642-103.0336-2-11-						0-C30766	24630	-0.06	395	3847	43	-32	3.9	29	-1.1	3	0.8	4710	29.5	4459	22	0.6
08-37.1492-103.0364-2-11-						0-C30767	29630	-0.05	306	6803	87	-49	5.8	51	1.8	7	1.4	11300	46.9	9191	48	1.1
08-37.1792-103.0419-2-11-						0-C30768	49420	-0.05	642	18440	58	-66	5.6	34	2.5	4	1.0	11030	12.6	17190	34	0.5
08-37.1933-103.0697-2-15-						0-C30770	43270	-0.08	987	82500	66	238	11.7	47	3.0	3	1.0	24970	9.6	10530	42	0.5
08-37.1978-103.0383-2-11-						0-C30772	42850	-0.07	600	16740	73	-82	6.1	38	-1.5	5	0.9	30170	22.7	16060	29	0.9
08-37.1344-103.0861-2-12-						0-C30775	45300	-0.06	472	20090	57	-57	7.5	44	2.2	4	0.9	15470	10.7	11300	24	0.4
08-37.1114-103.9364-2-12-						0-C30777	56910	-0.07	579	34190	82	-74	9.0	46	3.5	5	1.2	18790	7.9	15450	39	0.4
08-37.0564-103.9161-2-12-						0-C30782	44130	-0.08	361	110400	56	-78	10.5	71	-1.6	4	1.0	21600	7.0	10850	39	0.4
08-37.0047-103.9944-2-12-						0-C30784	57190	-0.06	431	129600	51	-71	15.8	157	3.5	3	0.8	35860	5.7	11660	32	0.3
08-37.0586-103.9850-2-12-						0-C30788	49500	-0.05	460	113400	57	-63	10.4	58	3.1	3	0.8	18370	4.9	11550	26	0.4
08-37.0011-103.7661-2-12-						0-C30796	53260	-0.07	551	70670	72	-77	10.1	67	2.9	4	1.0	18630	8.4	12800	39	0.4
08-37.0994-103.7711-2-15-						0-C30801	66010	-0.08	467	14360	76	-76	8.2	49	2.2	5	1.2	18430	10.6	16160	41	0.5
08-37.1239-103.7797-2-12-						0-C30804	51920	-0.06	602	35180	65	-70	9.5	43	3.8	5	1.0	17730	8.6	14750	35	0.4
08-37.0108-103.6511-2-15-						0-C30807	49660	-0.05	878	35060	46	-48	5.6	21	2.6	4	0.8	11120	7.3	14170	23	0.3
08-37.0144-103.6472-2-12-						0-C30808	43410	-0.05	687	26260	55	-54	6.0	27	2.0	4	0.9	11060	9.4	12160	28	0.4
08-37.0750-103.6994-2-12-						0-C30812	55400	-0.07	502	99730	60	-67	7.8	53	3.2	4	0.9	18790	6.7	13180	40	0.3
08-37.0728-103.6914-2-11-						0-C30813	50650	-0.05	503	103600	57	-55	9.6	39	3.1	5	0.9	16810	8.0	11910	29	0.4
08-37.0544-103.6764-2-12-						0-C30814	49900	-0.07	550	20730	75	-72	9.6	40	3.3	6	1.2	17480	8.5	14840	38	0.5
08-37.0558-103.6739-2-12-						0-C30815	66120	-0.07	460	68890	75	-71	10.4	61	4.1	5	1.2	19720	6.8	15350	32	0.5
08-37.0914-103.6881-2-11-						0-C30816	55050	-0.09	475	98670	66	-86	9.9	62	4.4	4	1.0	19980	5.5	17470	33	0.3
08-37.1147-103.7181-2-11-						0-C30817	62780	-0.07	742	24610	78	-90	20.2	139	-1.5	5	1.3	32990	8.7	16400	40	0.5
08-37.1044-103.6631-2-11-						0-C30818	57610	-0.05	851	47500	49	-80	7.2	43	1.7	4	1.0	16130	7.8	21630	28	0.4
08-37.0553-103.6272-2-12-						0-C30820	64360	-0.08	591	39000	70	-76	9.6	62	2.7	6	1.0	16860	10.3	14250	43	0.4
08-37.0456-103.6017-2-15-						0-C30822	47530	-0.05	489	32040	57	-60	8.3	42	2.0	4	0.8	12660	7.9	12250	27	0.4
08-37.0228-103.5642-2-12-						0-C30824	49310	-0.06	670	24140	50	-59	5.9	23	2.3	4	0.9	11710	8.6	19090	31	0.4
08-37.0203-103.5642-2-12-						0-C30826	52350	-0.05	784	29230	57	54	7.2	30	2.6	4	0.9	12720	8.7	15710	35	0.4
08-37.0211-103.5536-2-11-						0-C30827	52920	-0.05	906	33020	52	-57	6.0	28	2.1	5	0.9	11180	8.9	17330	34	0.4
08-37.0483-103.5694-2-99-						0-C30828	56790	-0.07	1168	17380	64	-61	7.4	30	3.1	5	1.0	16410	6.1	16070	41	0.5
08-37.0700-103.5825-2-12-						0-C30829	77760	-0.09	365	43450	76	-58	8.9	51	3.7	5	1.0	14960	6.9	12320	42	0.5
08-37.0714-103.5869-2-12-						0-C30830	70260	-0.06	603	33350	69	-68	11.2	62	3.9	5	1.1	20370	7.8	16060	38	0.4
08-37.0744-103.5339-2-12-						0-C30831	72250	-0.07	672	24300	78	-83	12.3	64	3.5	5	1.1	21670	7.1	18950	45	0.4
08-37.0733-103.5372-2-12-						0-C30832	69500	-0.08	667	36160	97	-85	11.0	65	3.9	5	1.2	20310	8.8	17980	49	0.6
08-37.0592-103.5589-2-15-						0-C30834	52530	-0.09	472	61970	76	-80	9.8	51	4.0	4	1.1	18870	7.1	14430	43	0.4
08-37.0053-103.5119-2-11-						0-C30836	50400	-0.06	876	67260	57	-66	8.0	23	2.7	4	1.1	12580	8.0	16250	29	0.3
08-37.0269-103.5264-2-12-						0-C30837	54550	-0.05	611	41730	56	-68	6.8	40	2.5	4	0.9	13790	7.8	15770	34	0.4
08-37.0239-103.5289-2-12-						0-C30838	49020	-0.05	863	32390	52	-58	7.0	29	2.1	4	1.0	11290	8.8	12660	27	0.4
08-37.0447-103.5450-2-15-						0-C30839	49950	-0.07	617	39300	54	-60	5.8	30	2.8	4	0.9	11900	6.9	14160	26	0.4
08-37.0406-103.5483-2-12-						0-C30840	61610	-0.04	587	34260	62	-62	8.8	44	3.5	5	0.9	15010	5.7	18040	26	0.4
08-37.0256-103.5081-2-12-						0-C30841	62000	-0.05	580	30510	63	-69	8.0	40	3.2	5	1.0	16310	7.0	16920	33	0.4
08-37.0308-103.4894-2-12-						0-C30844	46160	-0.06	816	36940	57	-65	7.0	45	2.5	4	1.0	12270	10.5	13570	30	0.4
08-37.0564-103.4681-2-12-						0-C30846	67300	-0.10	709	18910	92	-98	16.8	109	2.7	5	1.2	29580	11.1	15070	48	0.5

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

4

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS (continued)														U/Th RATIO	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)														
							Mg	Mn	Na	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	Ti	V	Yb	Zn
08-37.1314-103.2669-2-15-			0-C30740			12540	461	9362	42	-2	8.7	5.5	-272	-1	-1	10.8	3736	82	3.7	77	0.306
08-37.1986-103.2533-2-15-			0-C30741			14970	527	8287	55	-2	9.1	6.5	-343	-1	-1	14.3	3724	84	4.8	157	0.224
08-37.2106-103.2331-2-11-			0-C30742			16510	587	7924	-31	-3	9.2	5.2	-403	-1	-1	13.2	3881	89	-2.7		0.348
08-37.2086-103.1683-2-15-			0-C30749			12260	420	9173	58	-2	8.1	5.9	-272	-1	-1	13.2	3706	80	4.7	93	0.273
08-37.1758-103.1342-2-15-			0-C30756			13490	464	5488	65	-2	12.0	6.1	-274	-1	-1	15.9	4609	108	4.7	105	0.296
08-37.1747-103.1535-2-12-			0-C30757			9525	585	7583	51	-2	8.0	9.7	-335	1	-1	12.8	4011	74	4.3	-34	1.250
08-37.1250-103.1706-2-12-			0-C30758			5738	772	6593	-26	-2	7.1	4.2	-366	-6	-1	9.9	7921	112	6.7	-249	0.515
08-37.1553-103.1825-2-15-			0-C30759			9158	666	6894	37	-2	7.7	6.5	-285	-1	-1	13.5	6389	101	6.1	77	0.296
08-37.1358-103.0164-2-12-			0-C30762			7619	346	9301	35	-1	4.8	3.7	-209	-1	-1	8.5	3768	55	3.4	35	0.482
08-37.1661-103.0314-2-12-			0-C30765			-3221	755	6522	-19	-2	6.0	5.4	-311	1	-1	15.4	7356	124	6.6	86	0.390
08-37.1642-103.0336-2-11-			0-C30766			-1515	62	1883	-16	-2	4.0	2.1	-134	-1		8.3	2755	28	3.5		0.482
08-37.1492-103.0364-2-11-			0-C30767			3987	223	5871	29	-1	5.6	7.0	-134	1	1	15.1	5472	56	7.3	51	0.437
08-37.1792-103.0419-2-11-			0-C30768			7973	209	11140	40	-2	5.2	4.9	-207	-1		9.0	3452	52	3.6	68	0.544
08-37.1933-103.0697-2-15-			0-C30770			9168	2110	6844	-24	-2	6.2	6.1	-662	-1		9.8	2671	97	3.4	-85	0.704
08-37.1978-103.0383-2-11-			0-C30772			4545	596	9839	-26	-2	5.9	4.1	-340	2	-1	10.7	5409	102	6.1	36	0.551
08-37.1344-103.0861-2-12-			0-C30775			9873	468	5155	34	-2	6.2	3.8	-250	-1	-1	8.4	3729	61	3.7	74	0.452
08-37.1114-103.9364-2-12-			0-C30777			14760	442	7823	45	-2	8.4	6.5	-285	-1	1	11.2	3712	81	4.1	97	0.330
08-37.0564-103.9161-2-12-			0-C30782			15990	546	5301	-27	-2	7.7	4.1	-319	-4	-1	8.3	4012	112	3.3	-170	0.410
08-37.0047-103.9944-2-12-			0-C30784			20970	679	4876	46	-2	9.2	4.1	646	-1	-1	8.4	7473	180	2.7	155	0.464
08-37.0586-103.9850-2-12-			0-C30788			12450	436	4816	39	-2	7.3	4.3	614	1		9.2	3446	82	2.8	86	0.446
08-37.0011-103.7661-2-12-			0-C30796			12350	427	7215	32	-2	7.6	5.5	456	-1		10.2	3871	82	4.3	95	0.333
08-37.0994-103.7711-2-15-			0-C30801			10670	474	8335	54	-2	8.5	4.4	-300	-1	-1	11.5	3593	74	4.1	-81	0.313
08-37.1239-103.7797-2-12-			0-C30804			12510	579	5868	38	-2	7.9	5.3	-301	-1	-1	11.7	3404	71	3.9	121	0.299
08-37.0108-103.6511-2-15-			0-C30807			12400	315	4891	36	-1	5.5	3.3	408	-1		7.9	2424	43	2.6	58	0.418
08-37.0144-103.6472-2-12-			0-C30808			9506	285	4845	24	-1	5.1	3.8	-212	-1	-1	7.8	2718	46	3.3	67	0.410
08-37.0750-103.6994-2-12-			0-C30812			14010	336	4532	-25	-2	7.5	4.9	-257	-1	-1	10.2	2630	87	3.1	79	0.451
08-37.0728-103.6914-2-11-			0-C30813			10410	354	4149	34	2	7.0	4.7	514	1	1	11.1	3337	78	3.7	89	0.414
08-37.0544-103.6764-2-12-			0-C30814			13820	616	7011	40	-2	8.7	5.4	-306	-1	-1	14.1	3575	81	4.1	-75	0.475
08-37.0558-103.6739-2-12-			0-C30815			14440	423	5180	-23	-2	8.7	5.0	-286	-1	-1	12.6	3822	98	4.0	-91	0.413
08-37.0914-103.6881-2-11-			0-C30816			20870	475	5670	-30	-3	9.1	3.2	-344	-1	-1	9.5	3563	111	-2.2	-109	0.611
08-37.1147-103.7181-2-11-			0-C30817			26930	901	11330	43	-2	12.2	5.2	499	2	-1	9.4	7294	119	3.3	-55	0.340
08-37.1044-103.6631-2-11-			0-C30818			11210	333	14890	42	-2	6.3	3.5	-247	-1	-1	6.3	3789	64	3.2	-58	0.444
08-37.0553-103.6272-2-12-			0-C30820			13160	427	7125	43	-2	7.6	6.0	-291	-1	-1	10.9	4141	96	4.4	68	0.376
08-37.0456-103.6017-2-15-			0-C30822			7704	315	5472	33	-2	5.6	4.1	-239	-1	1	9.2	3043	54	2.9	91	0.359
08-37.0228-103.5642-2-12-			0-C30824			11910	293	4815	-21	-2	6.1	3.9	-238	-1		8.1	2439	50	3.1	101	0.370
08-37.0203-103.5642-2-12-			0-C30826			16610	374	4395	45	-2	6.5	4.4	315	-1	-1	8.9	3462	46	3.1	49	0.382
08-37.0211-103.5536-2-11-			0-C30827			12190	367	5003	28	-2	6.0	3.9	-240	-1		7.6	2956	45	3.0	89	0.474
08-37.0483-103.5694-2-99-			0-C30828			20350	157	5560	54	-2	7.9	4.6	-221	-1	-1	11.1	2979	48	4.2	114	0.405
08-37.0700-103.5825-2-12-			0-C30829			19310	246	3136	43	-3	9.7	5.5	-243	-1	-1	14.1	3950	88	4.6	-52	0.411
08-37.0714-103.5869-2-12-			0-C30830			14420	435	7594	53	-2	9.5	5.7	-267	-1		12.0	4130	101	4.0	90	0.333
08-37.0744-103.5339-2-12-			0-C30831			16020	628	9591	58	-2	9.6	5.9	-332	-1	-1	10.2	5728	91	2.5	91	0.510
08-37.0733-103.5372-2-12-			0-C30832			13530	499	8208	59	-2	9.0	6.1	-334	-1	-1	12.9	4508	103	4.6	130	0.318
08-37.0692-103.5589-2-15-			0-C30834			14840	599	4917	52	-3	8.6	5.4	-365	-1	-1	11.7	4377	98	3.7	103	0.385
08-37.0053-103.5119-2-11-			0-C30836			18200	464	4497	50	-2	6.7	4.2	447	-1	-1	8.9	2965	63	3.3	66	0.618
08-37.0269-103.5264-2-12-			0-C30837			16910	417	7022	30	-2	6.8	4.3	343	-1	-1	8.2	3427	66	3.6	64	0.415
08-37.0239-103.5289-2-12-			0-C30838			12980	330	4845	39	-2	5.8	3.6	-238	-1		8.2	2669	47	3.0	115	0.402
08-37.0447-103.5450-2-15-			0-C30839			15220	367	4126	36	-2	6.2	3.8	-263	-1		9.0	2613	53	1.7	93	0.367
08-37.0406-103.5483-2-12-			0-C30840			14840	418	5701	45	-1	8.1	3.4	-257	-1	-1	11.8	3040	65	2.8	69	0.297
08-37.0256-103.5081-2-12-			0-C30841			17860	495	7395	42	-2	8.1	4.4	535	-1	-1	9.6	3887	69	3.0	100	0.333
08-37.0008-103.4894-2-12-			0-C30844			12740	390	5819	39	-2	5.9	4.5	-255	-1	-1	8.3	3246	58	4.0	85	0.361
08-37.0564-103.4681-2-12-			0-C30846			16430	711	9408	-35	-3	11.9	4.4	-403	2	-1	9.8	6105	113	5.0		0.357

[illegible]

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE										ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY		
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)										Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li	
08-37.0419-103.4306-2-15-			0-C30351	-5	-5	-5	23	-20	-15	9	-10	-15	1	13				
08-37.0400-103.4308-2-11-			0-C30352	-5	-5	-5	25	20	31	9	-10	-15	1	24				
08-37.0519-103.3822-2-11-			0-C30353	-5	-5	-5	15	-20	-15	14	-10	-15	2	26				
08-37.0908-103.3753-2-15-			0-C30354	-5	-5	-5	26	-20	-15	5	-10	-15	2	26				
08-37.1114-103.4153-2-12-			0-C30356	-5	-5	-5	13	-20	20	7	-10	-15	2	25				
08-37.1236-103.3919-2-11-			0-C30357	-5	-5	-5	-10	-20	24	12	-10	-15	2	33				
08-37.0067-103.3842-2-11-			0-C30358	-5	-5	-5	14	-20	-15	11	-10	-15	1	27				
08-37.0142-103.3997-2-12-			0-C30359	-5	-5	-5	21	-20	23	9	-10	-15	2	27				
08-37.0119-103.3667-2-15-			0-C30360	-5	-5	-5	16	-20	-15	7	-10	16	2	40				
08-37.0953-103.3447-2-11-			0-C30362	-5	-5	-5	20	-20	-15	6	-10	-15	2	32				
08-37.1089-103.3183-2-12-			0-C30365	-5	-5	-5	13	-20	-15	9	-10	-15	2	32				
08-37.1042-103.3183-2-12-			0-C30366	-5	-5	-5	16	-20	-15	11	-10	25	2	43				
08-37.1014-103.2786-2-12-			0-C30367	-5	-5	-5	19	-20	-15	-5	-10	-15	2	32				
08-37.0017-103.3511-2-15-			0-C30368	-5	-5	-5	-10	-20	-15	5	-10	-15	2	37				
08-37.0014-103.3000-2-15-			0-C30371	-5	-5	-5	13	-20	-15	14	-10	16	2	25				
08-37.0008-103.2553-2-15-			0-C30372	-5	-5	-5	18	-20	-15	17	-10	-15	2	37				
08-37.0436-103.2575-2-15-			0-C30374	-5	-5	-5	15	-20	-15	8	-10	24	2	46				
08-37.0456-103.2756-2-15-			0-C30375	-5	-5	-5	12	-20	-15	10	-10	-15	2	33				
08-37.0497-103.2614-2-15-			0-C30376	-5	-5	-5	16	-20	-15	5	-10	-15	1	36				
08-37.1058-103.2286-2-12-			0-C30380	-5	-5	-5	-10	-20	-15	11	-10	-15	2	34				
08-37.1064-103.1908-2-12-			0-C30381	-5	-5	-5	11	25	19	7	-10	-15	1	48				
08-37.0147-103.1869-2-12-			0-C30383	-5	-5	-5	22	-20	-15	5	-10	-15	1	34				
08-37.0542-103.2153-2-15-			0-C30384	-5	-5	-5	10	-20	-15	-5	-10	-15	2	25				
08-37.0417-103.2189-2-12-			0-C30386	-5	-5	-5	20	-20	-15	7	-10	-15	1	41				
08-37.0561-103.1431-2-11-			0-C30390	-5	-5	-5	18	-20	-15	13	-10	-15	2	33				
08-37.1033-103.1350-2-12-			0-C30393	-5	-5	-5	14	-20	-15	9	-10	-15	2	49				
08-37.1086-103.1561-2-12-			0-C30394	-5	-5	-5	19	-20	-15	7	-10	16	1	47				
08-37.0483-103.0994-2-11-			0-C30399	-5	-5	-5	-10	-20	-15	7	-10	-15	1	32				
08-37.0486-103.1025-2-12-			0-C30900	-5	-5	-5	14	-20	-15	11	-10	-15	2	21				
08-37.0408-103.0864-2-12-			0-C30901	-5	-5	-5	-10	-20	-15	6	-10	-15	2	26				
08-37.0386-103.0892-2-15-			0-C30902	-5	-5	-5	19	-20	-15	-5	-10	-15	1	17				
08-37.0294-103.0258-2-12-			0-C30903	-5	-5	-5	11	-20	-15	9	-10	-15	1	25				
08-37.0319-103.0428-2-11-			0-C30904	-5	-5	-5	14	-20	-15	15	-10	-15	2	27				
08-37.0333-103.0542-2-12-			0-C30905	-5	-5	-5	-10	21	-15	-5	-10	-15	1	17				
08-37.0664-103.0092-2-11-			0-C30906	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	10				
08-37.0622-103.0178-2-12-			0-C30907	-5	-5	-5	-10	-20	195	11	-10	-15	1	9				
08-37.0764-103.0403-2-15-			0-C30909	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	25				
08-37.1108-103.0742-2-15-			0-C30912	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	17				
08-37.1042-103.0800-2-12-			0-C30913	-5	-5	-5	-10	28	-15	5	-10	-15	2	26				
08-37.1172-103.1122-2-12-			0-C30914	-5	-5	-5	13	-20	-15	-5	-10	-15	1	26				
08-37.1067-103.0172-2-15-			0-C30915	-5	-5	-5	10	-20	-15	-5	-10	-15	1	16				
08-37.0992-103.0328-2-12-			0-C30916	-5	-5	-5	-10	-20	-15	11	-10	-15	1	15				
08-37.9039-102.5797-2-15-			0-C30923	-5	-5	-5	21	-20	-15	16	-10	-15	-1	17				
08-37.8819-102.5992-2-15-			0-C30924	-5	-5	-5	15	-20	-15	17	-10	-15	2	30				
08-37.9117-102.5094-2-15-			0-C30925	-5	-5	-5	11	-20	-15	16	-10	-15	1	14				
08-37.9817-102.5053-2-15-			0-C30928	-5	-5	-5	-10	-20	-15	16	-10	-15	1	14				
08-37.9344-102.5894-2-15-			0-C30936	-5	-5	-5	-10	-20	-15	-5	-10	15	1	13				
08-37.8375-102.5697-2-12-			0-C30938	-5	-5	-5	17	-20	-15	12	-10	-15	2	20				
08-37.8619-102.5131-2-15-			0-C30956	-5	-5	-5	-10	-20	-15	-5	-10	-15	-1	10				
08-37.7919-102.6094-2-15-			0-C30957	-5	-5	-5	-10	-20	33	13	-10	-15	1	20				
08-37.8181-102.5033-2-15-			0-C30960	-5	-5	-5	22	27	71	-5	11	22	1	6				

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER							ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS															
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu
08-37.0419-103.4306-2-15-			0-C30851			54630	-0.05		682	13020	72	-77	13.1	68	2.8	5	1.1	21550	7.6	18120	39	0.5
08-37.0400-103.4308-2-11-			0-C30852			65570	-0.07		654	29990	81	-82	14.2	97	2.7	5	1.1	24820	9.5	15320	40	0.5
08-37.0519-103.3822-2-11-			0-C30853			65130	-0.07		514	13820	84	-66	8.8	44	3.2	6	1.1	16150	10.3	16450	41	0.6
08-37.0908-103.3753-2-15-			0-C30854			63880	-0.08		565	16170	76	-85	9.1	53	3.3	5	1.1	17830	9.9	19630	43	0.5
08-37.1114-103.4153-2-12-			0-C30856			55130	-0.08		668	34070	75	-95	9.1	61	2.1	4	1.1	18280	13.9	17120	42	0.5
08-37.1236-103.3919-2-11-			0-C30857			62330	-0.06		656	24160	80	-81	12.4	59	3.3	5	1.1	19970	11.9	18530	46	0.6
08-37.0067-103.3842-2-11-			0-C30858			57240	-0.06		555	48140	51	-60	7.2	48	3.7	5	1.0	13250	8.0	13430	35	0.3
08-37.0142-103.3997-2-12-			0-C30859			59170	-0.07		691	27990	72	-79	10.1	42	2.8	5	1.1	16150	8.0	14340	39	0.5
08-37.0119-103.3667-2-15-			0-C30860			51150	-0.07		837	31940	50	-58	6.0	27	2.5	4	0.9	11150	10.3	13030	37	0.4
08-37.0953-103.3447-2-11-			0-C30862			58470	-0.06		630	15100	76	-73	10.8	54	2.4	5	1.1	18020	13.0	15620	42	0.6
08-37.1089-103.3183-2-12-			0-C30865			47860	-0.05		629	19720	79	-63	7.2	46	1.8	6	0.9	13110	19.9	14500	40	0.6
08-37.1042-103.3183-2-12-			0-C30866			57420	-0.07		691	35440	86	-79	9.7	55	2.8	5	1.1	15960	12.4	15600	45	0.7
08-37.1014-103.2786-2-12-			0-C30867			50160	-0.07		572	26190	82	-83	10.4	63	2.1	5	1.1	16140	20.4	15630	47	0.7
08-37.0017-103.3511-2-15-			0-C30868			46830	-0.05		598	33070	57	-49	7.8	30	1.9	4	0.8	11570	9.6	13020	30	0.4
08-37.0014-103.3000-2-15-			0-C30871			48730	-0.05		718	22590	48	-47	5.7	29	2.0	5	0.9	11880	11.3	11450	32	0.4
08-37.0008-103.2553-2-15-			0-C30872			59020	-0.07		645	26060	73	-66	8.2	45	2.6	5	1.0	13600	10.9	16840	42	0.5
08-37.0436-103.2575-2-15-			0-C30874			55010	-0.08		500	35540	48	-62	6.0	22	2.7	4	1.0	12520	6.5	15570	30	0.4
08-37.0456-103.2756-2-15-			0-C30875			58780	-0.06		700	17060	68	-62	9.0	33	3.0	5	1.0	14810	9.0	15970	37	0.5
08-37.0497-103.2614-2-15-			0-C30876			59190	-0.05		562	23390	66	-59	6.6	28	2.6	5	0.9	13250	6.7	15770	37	0.4
08-37.1058-103.2286-2-12-			0-C30880			54790	-0.07		601	32760	86	-79	9.8	65	2.4	5	1.1	15490	14.4	15190	44	0.6
08-37.1064-103.1908-2-12-			0-C30881			56900	-0.08		614	30800	70	-92	8.5	51	3.4	4	1.2	14370	9.7	15660	46	0.4
08-37.0147-103.1869-2-12-			0-C30883			43070	-0.05		620	25070	58	-52	7.5	47	1.7	4	1.0	11480	15.0	12300	30	0.5
08-37.0542-103.2153-2-15-			0-C30884			43380	-0.05		633	23700	43	-43	6.1	28	1.8	4	0.7	9963	9.0	12450	26	0.3
08-37.0417-103.2189-2-12-			0-C30886			52090	-0.05		567	27170	65	-65	8.0	35	2.9	4	1.0	12670	9.6	14290	28	0.4
08-37.0561-103.1431-2-11-			0-C30890			51330	-0.07		359	12370	64	-59	8.5	40	2.7	5	1.2	14650	10.3	9807	33	0.5
08-37.1033-103.1350-2-12-			0-C30893			56490	-0.05		615	20020	68	-69	10.0	46	2.5	4	1.0	16020	9.1	16730	35	0.5
08-37.1086-103.1561-2-12-			0-C30894			63580	-0.06		633	25010	72	-75	3.6	44	2.9	5	1.0	16910	9.1	17050	41	0.4
08-37.0483-103.0994-2-11-			0-C30899			49060	-0.06		585	17260	70	101	7.7	40	2.7	4	1.0	12720	10.4	14810	40	0.5
08-37.0486-103.1025-2-12-			0-C30900			48830	-0.07		436	14040	59	-63	7.0	36	3.0	4	1.0	12610	10.6	12120	38	0.4
08-37.0408-103.0864-2-12-			0-C30901			52470	-0.05		390	5654	66	-50	8.6	41	2.9	5	0.9	13110	12.7	11950	34	0.5
08-37.0386-103.0892-2-15-			0-C30902			29830	-0.04		345	10000	39	-38	4.7	25	1.2	4	0.8	8441	14.4	7348	27	0.3
08-37.0294-103.0258-2-12-			0-C30903			42020	-0.05		592	27510	59	-58	6.0	38	1.9	4	0.9	9978	11.9	11550	36	0.5
08-37.0319-103.0428-2-11-			0-C30904			51140	-0.07		594	23030	65	-70	7.3	37	3.1	4	1.1	13360	10.7	13170	35	0.4
08-37.0333-103.0542-2-12-			0-C30905			42250	-0.05		564	15100	59	-49	7.5	39	2.0	4	0.9	11780	11.9	10880	38	0.4
08-37.0664-103.0092-2-11-			0-C30906			31400	-0.05		627	12520	76	-56	6.2	68	-1.0	6	1.4	34990	28.2	11360	40	0.8
08-37.0622-103.0178-2-12-			0-C30907			28590	-0.05		698	13960	57	-58	5.4	54	-1.0	4	0.7	20910	23.9	8884	38	0.8
08-37.0764-103.0403-2-15-			0-C30909			48720	-0.07		428	12860	58	-59	6.5	27	2.9	4	0.9	12700	10.7	14780	34	0.4
08-37.1108-103.0742-2-15-			0-C30912			38830	-0.07		556	17920	53	86	7.9	43	1.8	4	0.9	10110	9.7	10810	31	0.5
08-37.1042-103.0800-2-12-			0-C30913			52880	-0.08		680	28290	63	-69	6.8	65	2.6	4	1.0	15160	9.5	14520	33	0.5
08-37.1172-103.1122-2-12-			0-C30914			48020	-0.11		575	28690	98	-74	10.1	88	-1.7	6	1.2	25080	24.2	14890	48	0.7
08-37.1067-103.0172-2-15-			0-C30915			37950	-0.10		641	14810	40	-68	5.1	45	-1.6	3	0.8	13330	11.4	14120	-9	0.5
08-37.0992-103.0328-2-12-			0-C30916			35710	-0.07		638	18230	51	-49	6.9	49	1.2	4	1.0	16260	14.2	11060	25	0.3
08-37.9039-102.5797-2-15-			0-C30923			59570	-0.09		555	23600	75	-37	9.0	40	2.5	5	1.1	17820	10.9	16550	42	0.5
08-37.8819-102.5992-2-15-			0-C30924			61990	-0.06		677	18340	81	-73	10.0	42	3.8	5	1.2	17250	9.7	18820	35	0.1
08-37.9117-102.5094-2-15-			0-C30925			56820	-0.06		727	23880	77	-75	9.1	33	3.3	6	1.2	16780	9.5	20080	39	0.5
08-37.9817-102.5053-2-15-			0-C30928			61850	-0.08		812	20990	89	-86	7.5	38	2.2	6	1.2	14930	12.9	19400	49	0.5
08-37.8344-102.5894-2-15-			0-C30936			51260	-0.07		467	18960	84	-78	7.5	47	-1.6	5	1.0	16650	16.1	19180	42	0.6
08-37.8375-102.5697-2-12-			0-C30938			67800	-0.06		671	16650	81	-73	10.9	47	4.1	6	1.3	18800	9.3	19950	48	0.5
08-37.8619-102.5131-2-15-			0-C30956			22310	-0.05		342	5145	103	-48	6.8	56	1.4	6	1.3	31760	24.1	7321	55	0.6
08-37.7919-102.6094-2-15-			0-C30957			50370	-0.06		517	18280	84	-64	7.8	40	2.9	5	1.0	14180	12.4	14230	40	0.5
08-37.8181-102.5033-2-15-			0-C30960			23480	-0.10		302	6405	267	-104	15.5	153	-2.1	7	1.4	100600	57.4	-4915	127	1.4

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

4

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS (continued)													U/Th RATIO			
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Mg	Mn	Na	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	Ti	V	Yb	Zn	
08-37.0419-103.4306-2-15-	0-C30851	14930	557	9101	-20	-2	9.6	5.4	-305	-1	1	11.3	4731	84	3.4	72	0.301					
08-37.0400-103.4308-2-11-	0-C30852	16990	492	10960	-23	-2	10.1	5.5	502	-1	-1	9.6	5843	109	4.2	123	0.417					
08-37.0519-103.3822-2-11-	0-C30853	12450	223	6275	46	-2	8.1	7.9	-249	-1	-1	11.8	4196	76	5.3	-86	0.729					
08-37.0908-103.3753-2-15-	0-C30854	13090	445	9428	67	-3	8.6	5.3	-319	-1	-1	11.4	3943	73	5.0	133	0.281					
08-37.1114-103.4153-2-12-	0-C30856	10520	440	11790	40	-2	7.7	5.3	-339	-1	-1	10.4	4086	82	4.1	99	0.635					
08-37.1236-103.3919-2-11-	0-C30857	15530	603	9688	-20	-2	8.7	5.8	-311	-1	-1	12.2	5106	83	5.2	74	0.377					
08-37.0067-103.3842-2-11-	0-C30858	18440	356	5024	44	-2	6.8	4.5	-245	-1		8.8	3382	58	3.6	68	0.352					
08-37.0142-103.3997-2-12-	0-C30859	13950	514	6699	40	-2	7.9	5.1	-323	-1	2	9.8	4016	70	3.7	83	0.612					
08-37.0119-103.3667-2-15-	0-C30860	10750	334	3511	-22	-2	6.2	3.2	-250	-1		9.0	2837	45	2.9	76	0.367					
08-37.0953-103.3447-2-11-	0-C30862	11140	517	8277	41	-2	8.0	6.3	-291	-1	-1	12.0	4050	81	4.3	85	0.508					
08-37.1089-103.3183-2-12-	0-C30865	9793	377	7881	29	-2	6.0	5.7	322	-1	-1	11.2	3979	64	4.7	69	0.670					
08-37.1042-103.3183-2-12-	0-C30866	15590	434	8483	55	-2	7.1	8.2	-303	-1	-1	11.3	3757	83	4.2	127	0.982					
08-37.1014-103.2786-2-12-	0-C30867	9275	422	9896	-25	-2	7.1	4.9	-301	-1	-1	13.2	4754	80	4.9		0.394					
08-37.0017-103.3511-2-15-	0-C30868	12770	317	3284	25	-2	6.3	3.7	633	-1		7.9	3072	49	3.5	69	0.354					
08-37.0014-103.3000-2-15-	0-C30871	9801	348	3525	33	-2	6.1	3.9	405	-1	-1	8.8	2936	52	3.1	74	0.398					
08-37.0008-103.2553-2-15-	0-C30872	13060	412	5051	57	-2	7.0	5.0	-287	-1	-1	12.8	3702	54	4.1	93	0.289					
08-37.0436-103.2575-2-15-	0-C30874	11170	329	3661	-23	-2	6.9	3.8	-267	-1	-1	9.0	2769	48	3.2	-59	0.389					
08-37.0456-103.2756-2-15-	0-C30875	9393	391	6215	47	-2	7.4	5.0	-252	-1	-1	10.5	3673	61	3.8	67	0.324					
08-37.0497-103.2614-2-15-	0-C30876	13640	399	5931	38	-2	6.8	4.5	-239	-1		9.5	3340	57	3.1	57	0.305					
08-37.1058-103.2285-2-12-	0-C30880	13290	410	9200	39	-2	6.9	5.6	-300	-1	1	12.1	4622	70	5.2	127	0.364					
08-37.1064-103.1908-2-12-	0-C30881	11600	626	10010	-25	-2	7.1	4.7	-363	-1	-1	9.7	3832	63	3.7		0.423					
08-37.0147-103.1869-2-12-	0-C30883	11960	313	4725	40	-1	6.1	4.2	271	-1	1	10.0	3692	50	4.3	45	0.390					
08-37.0542-103.2153-2-15-	0-C30884	10520	341	2796	27	-1	5.3	3.5	298	-1		7.0	2810	48	2.3	66	0.414					
08-37.0417-103.2189-2-12-	0-C30886	11440	380	5626	33	-2	6.2	5.2	-263	-1	-1	9.4	3327	57	4.2	78	0.351					
08-37.0561-103.1431-2-11-	0-C30890	7349	362	4325	-24	-2	7.2	4.4	-264	1	-1	10.6	3642	66	6.1	-19	0.802					
08-37.1033-103.1350-2-12-	0-C30893	12340	353	9170	45	-2	7.1	5.8	-251	-1	-1	10.2	4146	69	3.8	-69	0.696					
08-37.1086-103.1561-2-12-	0-C30894	14370	407	9489	66	-2	7.9	5.1	370	-1	-1	11.1	3797	76	4.4	110	0.486					
08-37.0483-103.0994-2-11-	0-C30899	9623	365	5829	-18	-2	6.1	4.8	-258	-1	-1	10.2	3852	58	5.2	89	0.373					
08-37.0486-103.1025-2-12-	0-C30900	10490	312	5324	-24	-2	6.8	4.0	-255	-1	-1	10.4	3418	60	3.3	-84	0.490					
08-37.0408-103.0864-2-12-	0-C30901	9435	293	4269	-16	-2	7.0	5.5	227	1	-1	10.5	4300	61	3.7	81	0.562					
08-37.0386-103.0892-2-15-	0-C30902	4452	275	2848	16	-1	3.9	3.1	-168	-1		6.6	2722	40	2.6	-25	0.439					
08-37.0294-103.0258-2-12-	0-C30903	10200	309	5256	38	-2	5.1	3.8	-229	-1	-1	10.0	3494	50	3.5	-73	0.330					
08-37.0319-103.0428-2-11-	0-C30904	12580	390	5987	39	-2	6.7	3.8	-285	-1		9.6	3542	58	4.0	-79	0.479					
08-37.0333-103.0542-2-12-	0-C30905	6900	327	4690	27	-2	5.7	4.6	-212	-1	-1	9.2	3237	50	3.0	61	0.457					
08-37.0664-103.0092-2-11-	0-C30906	8067	622	5711	20	-1	6.2	5.9	-238	2	-1	14.4	7148	122	5.4	51	0.396					
08-37.0622-103.0178-2-12-	0-C30907	4184	507	5338	-16	-1	5.0	5.1	-250	-1		9.6	5944	81	5.2	56	0.427					
08-37.0764-103.0403-2-15-	0-C30909	9075	343	4780	-22	-2	6.3	4.1	-256	-1	-1	8.8	3258	54	4.6	-69	0.352					
08-37.1108-103.0742-2-15-	0-C30912	9215	262	4631	-18	-2	4.8	3.8	-190	-1	-1	7.6	3038	45	3.1	64	0.434					
08-37.1042-103.0800-2-12-	0-C30913	11940	322	8437	31	-3	6.0	4.6	324	-1	-1	7.7	3725	71	4.0	96	0.519					
08-37.1172-103.1122-2-12-	0-C30914	10750	548	7194	-27	-3	7.3	8.9	444	-1	-1	16.5	5840	87	5.4	-58	0.285					
08-37.1067-103.0172-2-15-	0-C30915	5164	312	8509	-27	-3	4.0	2.5	-238	-1	-1	5.1	2944	44	3.2	-66	0.569					
08-37.0992-103.0328-2-12-	0-C30916	7653	371	4983	-18	-2	5.0	3.8	-212	-1	-1	8.4	4607	69	3.3	-25	0.607					
08-37.9039-102.5797-2-15-	0-C30923	14230	458	8550	48	-3	7.7	5.2	-341	-1		13.3	3610	62	4.5	-52	0.263					
08-37.8819-102.5992-2-15-	0-C30924	15000	467	9176	52	-2	3.0	5.7	-284	1	-1	13.2	4053	77	2.0	103	0.250					
08-37.9117-102.5094-2-15-	0-C30925	14720	509	9520	56	-2	7.9	5.5	-280	-1	-1	12.5	3591	83	3.4	-77	0.288					
08-37.9817-102.5053-2-15-	0-C30928	10570	494	10960	49	-3	6.5	7.0	-310	-1	-1	13.6	3596	66	5.0	62	0.287					
08-37.8344-102.5894-2-15-	0-C30936	10750	438	7994	-26	-2	7.1	5.5	-299	-1		13.7	4529	74	4.8	-55	0.292					
08-37.8375-102.5697-2-12-	0-C30938	15120	536	8798	56	-2	8.2	6.2	-303	-1	1	13.4	3876	75	4.4	111	0.269					
08-37.8619-102.5131-2-15-	0-C30956	-2401	685	3480	-17	-1	6.2	6.5	-243	1	-1	14.7	9545	115	4.6	56	0.401					
08-37.7919-102.6094-2-15-	0-C30957	9390	385	6295	-18	-2	6.2	6.9	-256	-1	-1	11.3	3898	60	4.2	100	0.345					
08-37.8181-102.5033-2-15-	0-C30960	-5294	1839	3371	-39	-3	15.4	16.5	-506	3	3	43.1	24730	287	11.7		0.200					

[illegible]

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

2

DOE SAMPLE NUMBER							ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE										ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)										Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li	
08-37.8461-102.3764-2-15-			0-C30964	-5	-5	-5	29	-20	-15	12	-10	-15			1	11		
08-37.7303-102.4008-2-12-			0-C30979	-5	-5	-5	-10	-20	-15	20	-10	-15			2	23		
08-37.7097-102.5336-2-15-			0-C30987	-5	-5	-5	10	-20	-15	10	-10	-15			2	26		
08-37.7372-102.5281-2-15-			0-C30989	-5	-5	-5	-10	-20	-15	9	-10	-15			1	18		
08-37.6867-102.6150-2-15-			0-C30993	-5	-5	-5	31	-20	19	20	-10	-15			2	27		
08-37.7050-102.6756-2-15-			0-C30996	-5	-5	-5	16	-20	32	-5	-10	-15			2	15		
08-37.7317-102.6569-2-15-			0-C30999	-5	-5	-5	-10	-20	-15	7	-10	-15			1	13		
08-37.6625-102.7225-2-15-			0-C31002	-5	-5	-5	13	-20	-15	10	-10	20			1	21		
08-37.7031-102.7794-2-15-			0-C31024	-5	-5	-5	17	-20	26	-5	-10	-15			-1	10		
08-37.6444-102.7781-2-15-			0-C31026	-5	-5	-5	21	-20	-15	8	-10	-15			1	23		
08-37.6481-102.7903-2-15-			0-C31027	-5	-5	-5	12	-20	-15	-5	-10	-15			1	16		
08-37.6564-102.8083-2-12-			0-C31028												1	37		
08-37.6397-102.8214-2-15-			0-C31029	-5	-5	-5	13	-20	-15	13	-10	-15			1	19		
08-37.6283-102.8506-2-12-			0-C31032	-5	-5	-5	-10	-20	21	14	-10	-15			2	16		
08-37.6300-102.8419-2-15-			0-C31033	-5	-5	-5	-10	-20	-15	17	-10	-15			2	24		
08-37.7333-102.8481-2-15-			0-C31036	-5	-5	-5	17	-20	-15	11	-10	-15			1	25		
08-37.7314-102.8553-2-15-			0-C31037	-5	-5	-5	22	-20	-15	7	-10	18			1	20		
08-37.7397-102.8211-2-15-			0-C31038	-5	-5	-5	-10	-20	-15	8	-10	-15			1	15		
08-37.7392-102.7097-2-15-			0-C31041	-5	-5	-5	29	21	16	10	-10	-15			1	21		
08-37.7206-102.7392-2-15-			0-C31042	-5	-5	-5	23	-20	19	9	-10	-15			1	15		
08-37.5864-102.5869-2-15-			0-C31049	-5	-5	-5	23	-20	-15	11	-10	-15			2	27		
08-37.5311-102.5108-2-11-			0-C31058	-5	-5	-5	17	-20	-15	13	-10	-15			1	28		
08-37.5511-102.6272-2-15-			0-C31065	-5	-5	-5	33	-20	-15	9	-10	-15			2	27		
08-37.5561-102.7235-2-15-			0-C31067	-5	-5	-5	18	-20	-15	12	-10	-15			2	38		
08-37.5814-102.6569-2-15-			0-C31071	-5	-5	-5	20	-20	-15	10	-10	-15			1	25		
08-37.6208-102.6708-2-15-			0-C31072	-5	-5	-5	13	-20	-15	-5	-10	-15			1	36		
08-37.5878-102.7933-2-15-			0-C31077	-5	-5	-5	18	-20	15	12	-10	-15			1	14		
08-37.5103-102.7775-2-15-			0-C31080	-5	-5	-5	12	-20	16	21	-10	-15			2	30		
08-37.5514-102.8394-2-15-			0-C31082	-5	-5	-5	21	-20	18	16	-10	-15			1	9		
08-37.5733-102.8192-2-15-			0-C31086	-5	-5	-5	32	64	14	4	-10	-15			-1	9		
08-37.5919-102.9000-2-11-			0-C31088	-5	-5	-5	39	-20	317	11	-10	-15			1	10		
08-37.5914-102.9036-2-15-			0-C31089	-5	-5	-5	14	-20	15	12	-10	-15			1	19		
08-37.6167-102.9675-2-15-			0-C31093	-5	-5	-5	20	-20	16	11	-10	-15			2	17		
08-37.5792-102.9886-2-15-			0-C31094	-5	-5	-5	14	-20	-15	15	-10	-15			1	17		
08-37.5581-102.8911-2-11-			0-C31095	-5	-5	-5	16	-20	-15	7	-10	-15			1	23		
08-37.5325-102.8872-2-15-			0-C31100	-5	-5	-5	24	-20	29	13	-10	-15			2	27		
08-37.5378-102.9061-2-15-			0-C31101	-5	-5	-5	26	-20	23	19	-10	-15			2	36		
08-37.5269-102.9147-2-11-			0-C31103	-5	-5	-5	34	-20	20	7	-10	-15			1	40		
08-37.4958-102.9342-2-11-			0-C31104	-5	-5	-5	23	-20	-15	12	-10	-15			1	25		
08-37.5736-102.0953-2-15-			0-C31115	-5	-5	-5	16	-20	-15	16	-10	-15			2	26		
08-37.5453-102.1483-2-15-			0-C31117	-5	-5	-5	16	-20	-15	7	-10	-15			2	23		
08-37.5472-102.2272-2-15-			0-C31119	-5	-5	-5	17	-20	-15	18	-10	-15			2	23		
08-37.5578-102.2244-2-15-			0-C31121	-5	-5	-5	19	-20	-15	15	-10	-15			1	26		
08-37.2983-102.4914-2-15-			0-C31126	-5	-5	-5	16	-20	-15	11	-10	-15			1	19		
08-37.3108-102.4439-2-15-			0-C31127	-5	-5	-5	10	21	-15	12	-10	19			1	17		
08-37.5278-102.3336-2-15-			0-C31138	-5	-5	-5	17	-20	-15	22	-10	-15			2	28		
08-37.5239-102.3350-2-15-			0-C31139	-5	-5	-5	13	-20	-15	13	-10	-15			2	20		
08-37.5775-102.2564-2-15-			0-C31142	-5	-5	-5	16	-20	-15	10	-10	-15			2	25		
08-37.6378-102.2925-2-15-			0-C31147	-5	-5	-5	-10	-20	-15	11	-10	-15			2	23		
08-37.0942-102.1411-2-15-			0-C31156	-5	-5	-5	-10	-20	-15	11	-10	-15			1	23		
08-37.0050-102.0603-2-15-			0-C31159	-5	-5	-5	-10	-20	-15	-5	-10	-15			-1	9		

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS																
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu
08-37.8461-102.3764-2-15-			0-C30964	70680	-0.06	705	17360	82	-69	10.5	49	3.4	6	1.0	19500	8.7	21420	49	0.5			
08-37.7303-102.4008-2-12-			0-C30979	52680	-0.06	708	22470	83	-72	8.4	40	3.0	6	1.2	16270	11.8	18730	46	0.5			
08-37.7097-102.5336-2-15-			0-C30987	60860	-0.09	668	14450	101	-76	9.0	57	3.2	6	1.3	16620	12.0	18820	51	0.6			
08-37.7372-102.5281-2-15-			0-C30989	52960	-0.07	517	18000	64	-67	6.5	34	2.2	4	1.0	13380	10.8	19630	39	0.5			
08-37.6867-102.6150-2-15-			0-C30993	66950	-0.06	785	20600	84	-76	10.5	45	3.4	6	1.1	20150	10.5	21680	48	0.5			
08-37.7050-102.6756-2-15-			0-C30996	53040	-0.06	915	35890	133	-78	9.3	84	2.4	7	1.3	42640	20.7	15040	67	0.6			
08-37.7317-102.6569-2-15-			0-C30999	35080	-0.10	444	18190	68	-54	6.7	59	-1.6	5	1.0	21020	15.4	10350	41	0.7			
08-37.6625-102.7225-2-15-			0-C31002	56730	-0.07	854	41640	80	-89	7.0	41	2.0	6	1.3	18570	14.1	19890	41	0.9			
08-37.7031-102.7794-2-15-			0-C31024	39880	-0.05	779	139000	68	-74	8.8	45	2.2	5	1.0	19260	12.1	14850	38	0.5			
08-37.6444-102.7781-2-15-			0-C31026	56770	-0.06	780	28800	83	-76	8.3	43	3.1	6	1.1	17590	9.8	18870	52	0.5			
08-37.6481-102.7903-2-15-			0-C31027	45900	-0.06	497	142300	71	-80	8.4	46	2.6	4	1.0	14550	7.8	12290	44	0.4			
08-37.6564-102.8083-2-12-			0-C31028	57450	-0.11	602	35040	71	-109	9.2	21	3.5	5	1.4	13980	14.0	21740	41	0.5			
08-37.6397-102.8214-2-15-			0-C31029	59980	-0.06	670	46900	73	-72	10.1	43	3.1	5	1.1	16470	8.9	17110	41	0.5			
08-37.6283-102.8506-2-12-			0-C31032	49670	-0.07	514	155100	48	-72	7.5	36	3.7	4	0.8	14320	6.3	13280	37	0.3			
08-37.6300-102.8419-2-15-			0-C31033	58340	-0.07	726	40230	95	-83	9.5	51	2.7	6	1.1	16510	12.5	17390	48	0.6			
08-37.7333-102.8481-2-15-			0-C31036	52030	-0.09	343	134300	45	-79	7.9	46	-1.8	3	0.7	15490	5.3	13500	33	0.3			
08-37.7314-102.8553-2-15-			0-C31037	48150	-0.06	426	172400	49	-64	9.7	45	3.7	3	0.8	15350	4.5	12690	30	0.3			
08-37.7397-102.8211-2-15-			0-C31038	42410	-0.05	706	162900	52	-65	7.6	36	2.5	4	0.9	16530	7.7	12130	38	0.4			
08-37.7392-102.7097-2-15-			0-C31041	44090	-0.07	696	75350	82	-78	7.6	48	2.5	5	1.1	17480	12.9	13780	37	0.6			
08-37.7206-102.7392-2-15-			0-C31042	44890	-0.07	690	123400	64	-86	6.8	38	2.6	5	0.9	15150	10.2	15190	38	0.5			
08-37.5864-102.5869-2-15-			0-C31049	60220	-0.07	692	38230	80	-74	11.8	47	4.0	5	1.1	19520	8.3	20310	48	0.4			
08-37.5311-102.5108-2-11-			0-C31058	54180	-0.06	675	17890	72	107	7.4	40	2.5	6	1.1	15200	10.6	25420	44	0.4			
08-37.5511-102.6272-2-15-			0-C31065	72590	-0.09	774	21590	110	-93	11.6	77	3.8	7	1.4	30290	15.4	17530	57	0.9			
08-37.5561-102.7236-2-15-			0-C31067	56470	-0.09	725	25040	88	-89	9.0	53	3.9	5	1.1	19540	9.8	19050	38	0.6			
08-37.5814-102.6569-2-15-			0-C31071	63810	-0.06	675	14580	81	-73	10.2	55	3.1	6	1.2	17510	12.0	19510	45	0.6			
08-37.6208-102.6708-2-15-			0-C31072	59270	-0.05	974	29430	74	-75	7.1	33	2.5	5	1.1	16630	11.7	21110	39	0.5			
08-37.5878-102.7933-2-15-			0-C31077	51430	-0.06	956	33240	99	-95	7.5	54	2.4	6	1.2	22650	16.2	17960	40	0.8			
08-37.5103-102.7775-2-15-			0-C31080	60430	-0.08	976	30170	102	-87	9.6	55	3.6	5	1.3	21520	14.8	17860	43	0.6			
08-37.5514-102.8394-2-15-			0-C31082	46540	-0.06	574	134000	72	-77	9.5	50	2.5	5	1.0	16860	9.6	12730	44	0.4			
08-37.5733-102.8192-2-15-			0-C31086	29750	-0.06	851	101300	188	-98	9.9	84	-1.4	7	1.9	66270	31.2	10990	88	1.0			
08-37.5919-102.9000-2-11-			0-C31088	27010	-0.10	-479	194500	39	-256	14.1	27	3.1	-2	0.8	9875	3.8	-11430	-11	0.2			
08-37.5914-102.9036-2-15-			0-C31089	56180	-0.06	588	103800	61	97	8.4	32	2.6	5	0.9	14640	8.6	15190	38	0.3			
08-37.6167-102.9675-2-15-			0-C31093	43630	-0.10	443	201300	54	-72	9.2	41	2.7	4	0.9	14220	3.8	12210	37	0.4			
08-37.5792-102.9886-2-15-			0-C31094	57660	-0.09	474	72380	69	-80	8.2	41	3.0	4	1.0	16820	7.5	17310	42	0.3			
08-37.5581-102.8911-2-11-			0-C31095	53250	-0.06	533	91980	65	-73	9.3	40	2.9	5	1.0	15140	9.3	15100	39	0.4			
08-37.5325-102.8872-2-15-			0-C31100	55110	-0.06	481	106600	56	-66	7.1	37	3.0	4	0.8	13330	6.4	16220	35	0.4			
08-37.5378-102.9061-2-15-			0-C31101	61160	-0.07	660	50830	78	-78	9.9	53	3.5	5	1.1	17550	9.9	16450	48	0.4			
08-37.5269-102.9147-2-11-			0-C31103	84950	-0.10	456	50970	77	239	9.0	52	5.6	4	0.9	20520	5.6	14310	46	0.4			
08-37.4958-102.9342-2-11-			0-C31104	53830	-0.07	435	102800	61	-63	10.8	46	3.8	5	1.0	16060	5.5	15620	35	0.4			
08-37.5736-102.0953-2-15-			0-C31115	58780	-0.09	782	20000	78	-74	8.3	42	4.0	5	1.1	16740	7.5	21610	47	0.4			
08-37.5453-102.1483-2-15-			0-C31117	67440	-0.08	815	22170	92	-82	9.2	70	2.1	6	1.4	25760	23.7	19880	47	0.8			
08-37.5472-102.2272-2-15-			0-C31119	61280	-0.08	611	19660	73	-89	8.2	38	4.0	5	1.1	16980	9.7	21190	38	0.5			
08-37.5578-102.2244-2-15-			0-C31121	59540	-0.06	680	19460	74	-73	8.9	45	3.8	5	1.0	15330	9.6	20150	37	0.5			
08-37.2983-102.4914-2-15-			0-C31126	54740	-0.06	802	41550	85	-73	7.9	46	3.0	6	1.1	21190	16.9	16140	50	0.5			
08-37.3108-102.4439-2-15-			0-C31127	57680	-0.07	702	39420	117	-91	10.7	62	3.3	6	1.4	32220	18.6	17860	57	0.8			
08-37.5278-102.3336-2-15-			0-C31138	57490	-0.08	704	12070	78	-84	8.0	43	2.7	4	1.1	16780	10.8	20880	42	0.5			
08-37.5239-102.3350-2-15-			0-C31139	57320	-0.05	767	24020	68	-69	8.4	39	3.0	5	1.0	14890	9.9	19600	37	0.5			
08-37.5775-102.2564-2-15-			0-C31142	52330	-0.06	752	33680	85	-74	8.6	45	3.2	6	1.0	19010	12.5	19700	49	0.5			
08-37.6378-102.2925-2-15-			0-C31147	55210	-0.06	812	31300	114	-82	8.8	47	2.2	7	1.4	17170	20.3	19150	55	0.8			
08-37.0942-102.1411-2-15-			0-C31156	42680	-0.04	868	32070	58	-61	6.3	28	1.6	4	0.9	13640	15.9	18060	35	0.5			
08-37.0050-102.0603-2-15-			0-C31159	29500	-0.04	465	4580	37	-47	4.5	26	-0.9	3	0.5	9250	11.7	12770	17	0.3			

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

4

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS (continued)															U/Th RATIO	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB. SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Mg	Mn	Na	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	Ti	V	Yb	Zn	
08-37.8461-102.3764-2-15-						0-C30964	15033	515	8026	64	-2	9.1	5.7	-282	1	-1	14.4	3943	84	3.6	95	0.243
08-37.7303-102.4008-2-12-						0-C30979	15009	476	9336	37	-2	7.3	6.0	-267	-1	-1	13.1	3734	75	4.7	81	0.351
08-37.7097-102.5336-2-15-						0-C30987	14170	439	8459	41	-3	7.5	7.3	-294	-1	-1	15.6	3633	71	5.2	89	0.237
08-37.7372-102.5281-2-15-						0-C30989	12330	314	6914	-22	-2	6.5	4.6	-260	-1		10.7	2989	60	3.2	114	0.336
08-37.6867-102.6150-2-15-						0-C30993	15460	606	9681	54	-2	8.9	6.3	-304	1	-1	13.4	4173	90	4.3	114	0.284
08-37.7050-102.6756-2-15-						0-C30996	12640	973	8216	-22	-2	8.7	8.5	-324	2	-1	23.5	9120	167	6.2	71	0.281
08-37.7317-102.6569-2-15-						0-C30999	6504	479	3845	-28	-3	5.6	5.4	-251	-1	-1	10.6	5263	74	3.1	60	0.349
08-37.6625-102.7225-2-15-						0-C31002	9710	592	9987	42	-2	7.1	6.9	-342	-1	-1	13.7	4655	80	5.0	-80	0.343
08-37.7031-102.7794-2-15-						0-C31024	9185	551	7427	-17	-2	5.9	5.5	685	-1	-1	12.4	4356	100	3.7	101	0.468
08-37.6444-102.7781-2-15-						0-C31026	16230	547	9086	44	-2	8.2	6.0	-298	-1	-1	12.7	3685	85	3.2	94	0.315
08-37.6481-102.7903-2-15-						0-C31027	12040	399	6699	38	-2	6.1	4.6	638	-1	-1	10.5	2835	73	3.7	88	0.514
08-37.6564-102.8083-2-12-						0-C31028	10470	497	8987	73	-3	6.0	4.5	-428	-2		13.2	3608	60	4.2	86	0.606
08-37.6397-102.8214-2-15-						0-C31029	12510	457	8381	53	-2	7.7	5.4	-272	-1	1	11.3	3530	79	3.6	74	0.345
08-37.6283-102.8506-2-12-						0-C31032	13420	307	4788	30	-2	6.6	4.3	891	-1		8.8	2516	127	2.7	106	1.216
08-37.6300-102.8419-2-15-						0-C31033	12940	472	9541	61	-2	7.3	5.9	-308	-1	-1	14.2	3863	80	3.6	114	0.296
08-37.7333-102.8481-2-15-						0-C31036	13680	309	4469	-29	-3	7.5	3.6	484	-1	-1	10.2	2669	106	-1.9	-58	0.549
08-37.7314-102.8553-2-15-						0-C31037	12300	223	3381	45	-2	7.4	4.1	982	-1	-1	8.3	2737	120	2.0	80	0.771
08-37.7397-102.8211-2-15-						0-C31038	10570	404	5009	33	-2	6.2	4.2	948	-1		9.0	2973	101	3.2	91	0.578
08-37.7392-102.7097-2-15-						0-C31041	12350	403	7518	30	-2	5.9	5.3	428	-1	-1	11.9	3908	76	3.5	-81	0.445
08-37.7206-102.7392-2-15-						0-C31042	9884	416	7909	-25	-2	6.3	3.8	693	-1	-1	8.8	3516	82	4.0	102	0.568
08-37.5864-102.5869-2-15-						0-C31049	18160	572	7078	45	-2	9.3	5.5	-313	1	-1	13.7	4034	91	3.7	123	0.248
08-37.5311-102.5108-2-11-						0-C31058	15930	269	11480	61	-2	7.1	5.7	361	-1	-1	11.2	4735	78	4.2	-79	0.634
08-37.5511-102.6272-2-15-						0-C31065	19690	968	7617	52	-3	11.4	8.2	-432	1	-1	18.7	6097	127	7.5	111	0.401
08-37.5561-102.7236-2-15-						0-C31067	20730	510	8452	63	-3	9.5	5.9	-349	-1	-1	15.5	3772	80	4.7		0.258
08-37.5814-102.6569-2-15-						0-C31071	12950	518	9535	48	-2	8.0	6.3	-287	-1	1	15.1	3715	72	4.5	88	0.252
08-37.6208-102.6709-2-15-						0-C31072	9713	586	10490	47	-2	6.5	4.9	-288	-1		9.4	4288	76	4.8	94	0.436
08-37.5878-102.7933-2-15-						0-C31077	7388	678	11420	46	-2	6.4	6.7	-321	-1	-1	15.0	5557	86	4.9	70	0.313
08-37.5103-102.7775-2-15-						0-C31080	13990	613	9100	48	-2	8.2	6.0	-348	-1	-1	13.8	4109	97	5.2	91	0.304
08-37.5514-102.8394-2-15-						0-C31082	8623	472	6366	-19	-2	6.4	5.8	545	-1		11.5	3770	120	3.4	81	0.609
08-37.5733-102.8192-2-15-						0-C31086	4688	1631	6625	36	-2	9.6	14.0	-424	2	1	31.3	17560	234	8.7	121	0.265
08-37.5919-102.9000-2-11-						0-C31088	-10980	4756	2601	-26	-3	4.3	4.4		-1	-1	7.4	-2772	63	-2.1	77	0.757
08-37.5914-102.9036-2-15-						0-C31089	14030	439	7028	35	-2	6.7	4.1	511	-1		9.7	2945	90	2.5	69	0.474
08-37.6167-102.9675-2-15-						0-C31093	12270	326	3709	-25	-3	6.1	4.3	885	-1	-1	8.1	2398	97	3.3	146	0.543
08-37.5792-102.9886-2-15-						0-C31094	17020	432	6716	56	-2	8.0	5.1	-309	-1	-1	11.6	3122	86	4.8	119	0.319
08-37.5581-102.8911-2-11-						0-C31095	10700	367	7183	42	-2	7.0	5.6	508	-1	-1	11.7	3755	89	3.9	104	0.658
08-37.5325-102.8872-2-15-						0-C31100	12880	309	6242	31	-2	6.9	4.1	507	-1	-1	9.7	3124	113	2.4	114	0.567
08-37.5378-102.9061-2-15-						0-C31101	12810	513	6427	59	-2	7.8	5.6	-331	-1	-1	13.0	3581	115	4.5	134	0.346
08-37.5269-102.9147-2-11-						0-C31103	26890	172	2139	-31	-3	10.1	5.3	681	-1	-1	18.2	3472	108	-2.0	-56	0.484
08-37.4958-102.9342-2-11-						0-C31104	15670	255	3903	38	-2	8.2	5.2	594	-1		12.7	3339	98	2.8	-66	0.709
08-37.5736-102.0953-2-15-						0-C31115	13580	417	9393	54	-3	7.9	6.0	-271	-1	-1	11.9	3654	78	2.9	72	0.244
08-37.5453-102.1483-2-15-						0-C31117	14050	501	8162	53	-2	8.8	5.7	-330	1	-1	12.6	3790	84	6.9	74	0.429
08-37.5472-102.2272-2-15-						0-C31119	14040	456	9410	-28	-3	8.1	4.9	-336	-1	-1	12.2	3369	71	4.3	121	0.320
08-37.5578-102.2244-2-15-						0-C31121	12860	401	9006	53	-2	7.7	5.5	-269	1	-1	12.7	3575	67	4.1	73	0.252
08-37.2983-102.4914-2-15-						0-C31126	10970	593	8905	47	-2	7.0	6.6	-277	-1	-1	14.0	5890	99	4.8	74	0.314
08-37.3108-102.4439-2-15-						0-C31127	11470	820	8128	57	-2	8.5	9.0	-377	-1	-1	19.0	7619	140	6.2	-107	0.247
08-37.5278-102.3336-2-15-						0-C31138	9528	471	9413	62	-2	7.6	5.6	-318	-1	-1	13.1	3340	65	4.1	51	0.252
08-37.5239-102.3350-2-15-						0-C31139	10450	422	8979	45	-2	6.8	4.8	-254	-1	-1	11.6	3568	69	4.2	63	0.267
08-37.5775-102.2564-2-15-						0-C31142	14770	526	9251	42	-2	7.7	5.9	-280	-1	-1	13.7	4469	89	4.5	98	0.270
08-37.6378-102.2925-2-15-						0-C31147	10900	546	9628	42	-2	6.5	8.6	-319	-1	-1	16.7	4705	75	6.6	-71	0.269
08-37.0942-102.1411-2-15-						0-C31156	4723	373	9064	40	-1	4.5	4.5	316	-1	-1	9.7	4204	52	4.4	-12	0.330
08-37.0050-102.0603-2-15-						0-C31159	5015	239	5008	-15	-1	3.2	2.6	-183	-1		6.4	2366	34	2.4	84	0.313

DOE SAMPLE NUMBER					LASL SAMPLE LOCATION NUMBER AND FIELD DATA															U CONCENTRATION															
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SODIUM (mg/l)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	SEDIMENT SAMPLES ANALYZED BY DELAYED NEUTRON COUNTING (DNC)	UNITS IN ppm
							DATE	HOUR																											
08-37.6850-102.1281-2-12	0-C31169-10/26/77-14	12-11.0-C-	7.6-	365-	18-1-6-5-6-1-3-2-3-4-3-2-4-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60			
08-37.6625-102.2185-2-11	0-C31179-10/27/77-13	25-	-	-	15-1-6-4-5-1-2-4-4-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.50			
08-37.9394-102.9008-2-15	0-C31190-07/12/77-10	30-	-	-	12-1-1-4-6-1-2-4-3-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80			
08-37.8803-102.9250-2-15	0-C31191-07/12/77-11	32-	-	-	-1-2-4-6-1-2-4-3-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00			
08-37.9119-102.9042-2-15	0-C31192-07/12/77-11	30-	-	-	15-1-1-4-6-1-2-4-3-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.90			
08-37.8714-102.9297-2-15	0-C31193-07/12/77-12	34-	-	-	3-1-2-4-6-1-2-4-3-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.10			
08-37.8722-102.9328-2-15	0-C31194-07/12/77-12	34-	-	-	15-1-2-4-6-1-2-4-3-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60			
08-37.9014-102.8719-2-15	0-C31199-07/12/77-19	30-	-	-	15-1-2-4-6-1-2-4-3-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20			
08-37.9406-102.8706-2-15	0-C31200-07/12/77-19	36-	-	-	15-1-1-4-6-1-2-4-3-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50			
08-37.9425-102.8769-2-15	0-C31201-07/12/77-19	36-	-	-	12-1-1-4-5-1-2-5-2-4-4-3-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60			
08-37.9694-102.8689-2-15	0-C31202-07/13/77-9	31-	-	-	19-1-2-4-6-1-2-4-3-1-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60			
08-37.9644-102.8786-2-12	0-C31203-07/12/77-20	35-25.0-C-	8.0-	2700-	22-1-1-6-8-2-3-5-2-4-4-3-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00			
08-37.9083-102.7939-2-15	0-C31205-07/13/77-16	38-	-	-	12-1-1-5-8-1-2-4-3-2-1-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80			
08-37.9211-102.7625-2-15	0-C31208-07/13/77-19	36-	-	-	12-1-6-7-6-1-2-4-4-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.80			
08-37.8386-102.8925-2-11	0-C31212-07/14/77-11	-24.0-C-	9.0-	210-	15-1-2-6-8-1-2-5-4-2-2-2-3																														

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

2

DOE SAMPLE NUMBER							ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE										ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB. SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)										Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li	
08-37.6850-102.1281-2-12-			0-C31169	-5	-5	-5	-10	-20	17	8	-10	-15			1	27		
08-37.6625-102.2186-2-11-			0-C31179	-5	-5	-5	17	-20	-15	16	-10	-15			2	19		
08-37.9394-102.9008-2-15-			0-C31190	-5	-5	-5	10	-20	-15	-5	-10	-15			2	25		
08-37.8803-102.9250-2-15-			0-C31191	-5	-5	-5	-10	-20	-15	7	-10	-15			1	23		
08-37.9119-102.9042-2-15-			0-C31192	-5	-5	-5	17	-20	17	11	-10	-15			2	25		
08-37.8714-102.9297-2-15-			0-C31193	-5	-5	-5	-10	-20	-15	11	-10	-15			1	19		
08-37.8722-102.9328-2-15-			0-C31194	-5	-5	-5	16	-20	-15	-5	-10	-15			1	25		
08-37.9014-102.8719-2-15-			0-C31199	-5	-5	-5	13	-20	-15	8	-10	-15			1	28		
08-37.9406-102.8706-2-15-			0-C31200	-5	-5	-5	19	-20	24	7	-10	-15			2	27		
08-37.9425-102.8769-2-15-			0-C31201	-5	-5	-5	17	-20	-15	12	-10	-15			2	28		
08-37.9694-102.8689-2-15-			0-C31202	-5	-5	-5	-10	-20	-15	18	-10	-15			2	21		
08-37.9644-102.8786-2-12-			0-C31203	-5	-5	-5	10	-20	-15	7	-10	-15			1	19		
08-37.9083-102.7939-2-15-			0-C31205	-5	-5	-5	21	-20	-15	-5	-10	-15			2	24		
08-37.9211-102.7625-2-15-			0-C31208	-5	-5	-5	24	-20	-15	7	-10	-15			2	33		
08-37.8386-102.8925-2-11-			0-C31212	-5	-5	-5	-10	-20	-15	6	-10	-15			2	14		
08-37.8322-102.9261-2-15-			0-C31213	-5	-5	-5	15	-20	-15	12	-10	-15			2	32		
08-37.8078-102.9514-2-11-			0-C31214	-5	-5	-5	16	-20	-15	13	-10	-15			1	12		
08-37.8397-102.9472-2-11-			0-C31216	-5	-5	-5	19	30	-15	13	-10	-15			2	32		
08-37.7847-102.9367-2-11-			0-C31218	-5	-5	-5	14	-20	-15	8	-10	-15			1	23		
08-37.7714-102.9292-2-15-			0-C31219	-5	-5	-5	22	27	17	12	-10	-15			2	32		
08-37.7528-102.9367-2-15-			0-C31221	-5	-5	-5	26	-20	-15	16	-10	-15			2	39		
08-37.7633-102.9167-2-15-			0-C31222	-5	-5	-5	-10	39	-15	-5	-10	-15			1	12		
08-37.8658-102.7728-2-15-			0-C31224	-5	-5	-5	12	27	-15	-5	-10	-15			2	26		
08-37.8047-102.7411-2-15-			0-C31226	-5	-5	-5	-10	-20	-15	17	-10	-15			2	25		
08-37.8075-102.7214-2-15-			0-C31228	-5	-5	-5	17	25	-15	7	-10	-15			2	22		
08-37.7681-102.6817-2-15-			0-C31232	-5	-5	-5	25	36	-15	9	-10	-15			2	33		
08-37.7756-102.6742-2-12-			0-C31233	-5	-5	-5	-10	-20	-15	6	-10	-15			1	21		
08-37.8383-102.6758-2-12-			0-C31235	-5	-5	-5	13	36	-15	5	-10	-15			2	25		
08-37.8578-102.6772-2-15-			0-C31236	-5	-5	-5	28	40	-15	9	-10	-15			2	33		
08-37.8047-102.8369-2-11-			0-C31243	-5	-5	-5	12	-20	-15	18	-10	-15			2	18		
08-37.7989-102.8303-2-15-			0-C31244	-5	-5	-5	16	-20	-15	16	-10	-15			2	22		
08-37.7961-102.8311-2-11-			0-C31245	-5	-5	-5	16	-20	16	-5	-10	-15			1	16		
08-37.8428-102.8081-2-15-			0-C31247	-5	-5	-5	12	-20	-15	7	-10	-15			2	33		
08-37.8361-102.8317-2-11-			0-C31249	-5	-5	-5	20	-20	-15	10	-10	-15			1	14		
08-37.7458-102.8431-2-15-			0-C31252	-5	-5	-5	21	27	25	11	-10	-15			-1	7		
08-37.7592-102.8539-2-15-			0-C31253	-5	-5	-5	10	-20	38	7	-10	-15			1	11		
08-37.7892-102.8642-2-15-			0-C31254	-5	-5	-5	-10	-20	-15	8	-10	-15			1	25		
08-37.8167-102.8728-2-11-			0-C31256	-5	-5	-5	24	-20	-15	9	-10	-15			2	23		
08-37.8256-102.8750-2-11-			0-C31257	-5	-5	-5	23	-20	-15	11	-10	-15			2	30		
08-37.8164-102.8733-2-11-			0-C31258	-5	-5	-5	-10	-20	-15	-5	-10	-15			-1	5		
08-37.9086-102.6942-2-15-			0-C31259	-5	-5	-5	25	-20	-15	15	-10	-15			2	28		
08-37.8872-102.6356-2-15-			0-C31260	-5	-5	-5	20	28	-15	-5	-10	-15			2	18		
08-37.9517-102.6681-2-15-			0-C31261	-5	-5	-5	23	-20	-15	7	-10	-15			2	32		
08-37.9922-102.6375-2-15-			0-C31267	-5	-5	-5	18	24	-15	12	-10	-15			2	28		
08-37.9947-102.6764-2-15-			0-C31268	-5	-5	-5	19	-20	-15	16	-10	-15			2	40		
08-37.9867-102.7425-2-15-			0-C31269	-5	-5	-5	-10	37	-15	8	-10	-15			2	29		
08-37.9183-102.6975-2-15-			0-C31274	-5	-5	-5	26	21	-15	8	-10	15			2	25		
08-37.3081-102.8031-2-15-			0-C31288	-5	-5	-5	28	-20	-15	10	-10	-15			1	22		
08-37.2908-102.8300-2-15-			0-C31289	-5	-5	-5	23	22	-15	17	-10	-15			1	20		
08-37.2664-102.9806-2-15-			0-C31295	-5	-5	-5	11	-20	20	17	-10	-15			2	25		
08-37.3606-102.8867-2-15-			0-C31299	-5	-5	-5	-10	-20	21	-5	-10	-15			1	21		

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS																
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAS SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu
08-37.6850-102.1281-2-12-						0-C311169	58270	-0.05	662	16850	74	-71	9.4	40	2.0	5	1.1	16350	11.1	20040	42	0.5
08-37.6625-102.2186-2-11-						0-C311179	47710	-0.06	715	11200	100	-78	8.0	60	2.1	6	1.2	32700	23.2	18270	47	0.8
08-37.9394-102.9008-2-15-						0-C311190	58270	-0.08	404	17060	74	-83	8.4	42	3.5	6	1.1	16540	12.1	19010	41	0.6
08-37.8803-102.9250-2-15-						0-C311191	52230	-0.06	543	13920	81	-65	8.2	46	2.5	6	1.1	14630	15.9	16000	48	0.6
08-37.9119-102.9042-2-15-						0-C311192	59410	-0.06	694	19670	81	-64	7.4	40	3.1	6	1.1	14840	13.0	16040	42	0.5
08-37.8714-102.9297-2-15-						0-C311193	42470	-0.06	581	10760	104	-65	6.7	43	1.9	6	1.1	10650	26.7	13640	51	0.8
08-37.8722-102.9328-2-15-						0-C311194	53010	-0.07	606	13990	69	-76	7.1	43	2.9	5	1.3	14140	12.6	16620	47	0.6
08-37.9014-102.8719-2-15-						0-C311199	50840	-0.06	506	75410	66	-65	9.3	36	2.9	5	1.0	14030	9.2	19290	34	0.5
08-37.9406-102.8706-2-15-						0-C312000	63940	-0.06	593	20030	67	-70	8.4	36	3.1	6	1.1	15990	9.6	18810	40	0.4
08-37.9425-102.8769-2-15-						0-C31201	59190	-0.07	648	17520	83	-77	9.0	46	2.6	6	1.2	15270	13.1	19020	48	0.5
08-37.9694-102.8689-2-15-						0-C31202	49170	-0.07	510	11700	83	-76	7.2	34	2.6	5	1.0	13540	15.2	15600	51	0.6
08-37.9644-102.8786-2-12-						0-C31203	46540	-0.05	530	61080	67	92	7.7	40	2.3	5	1.0	13020	12.3	15180	45	0.5
08-37.9083-102.7939-2-15-						0-C31205	63110	-0.06	661	37050	79	-73	8.8	36	3.2	6	0.9	16130	11.1	20340	50	0.5
08-37.9211-102.7625-2-15-						0-C31208	61490	-0.08	574	43210	76	-80	6.6	31	3.7	5	1.1	14990	9.4	16270	34	0.4
08-37.8386-102.8925-2-11-						0-C31212	36460	-0.05	440	9670	55	47	6.5	30	1.8	4	0.9	10500	13.6	10540	33	0.4
08-37.8322-102.9261-2-15-						0-C31213	63620	-0.06	638	14710	72	-73	7.9	49	3.3	6	1.1	15640	9.6	19870	43	0.5
08-37.8078-102.9514-2-11-						0-C31214	33680	-0.06	341	5122	49	-52	7.6	30	1.7	4	0.7	8622	10.7	10180	25	0.4
08-37.8397-102.9472-2-11-						0-C31216	67550	-0.07	398	5701	67	-48	8.9	55	4.6	5	0.9	17800	12.0	15410	46	0.6
08-37.7847-102.9367-2-11-						0-C31218	54120	-0.06	544	14790	72	-65	8.1	44	2.1	5	0.9	14920	13.2	12340	47	0.5
08-37.7714-102.9292-2-15-						0-C31219	64510	-0.07	606	16010	85	-74	9.6	45	3.2	6	1.2	16140	11.9	18960	42	0.6
08-37.7528-102.9367-2-15-						0-C31221	67130	-0.06	459	20090	72	-55	8.3	42	3.1	6	1.0	17460	8.5	17140	37	0.5
08-37.7633-102.9167-2-15-						0-C31222	36690	-0.06	412	172600	53	-64	5.5	22	-1.3	3	0.8	13670	8.9	9281	31	0.4
08-37.8658-102.7728-2-15-						0-C31224	58090	-0.06	615	63650	60	-66	7.1	41	2.9	5	0.9	14660	9.2	17130	38	0.4
08-37.8047-102.7411-2-15-						0-C31226	57220	-0.08	632	48040	68	-81	7.9	38	-1.7	4	1.2	17460	10.0	16610	46	0.4
08-37.8075-102.7214-2-15-						0-C31228	61420	-0.06	641	44960	79	-69	7.4	39	2.9	6	1.1	15950	10.6	21740	46	0.4
08-37.7681-102.6817-2-15-						0-C31232	61940	-0.08	507	23760	72	-76	7.8	41	3.0	4	1.2	17950	10.4	16850	42	0.4
08-37.7756-102.6742-2-12-						0-C31233	41240	-0.05	530	72220	70	58	7.3	34	1.7	5	1.0	14400	11.7	11990	39	0.4
08-37.8383-102.6758-2-12-						0-C31235	58940	-0.08	716	62220	90	-89	9.8	54	3.7	5	1.6	18700	11.1	14800	41	0.6
08-37.8578-102.6772-2-15-						0-C31236	62420	-0.08	612	31730	76	-84	8.2	45	3.4	4	1.4	18880	10.1	19860	42	0.5
08-37.8047-102.8369-2-11-						0-C31243	50790	-0.05	180	6461	62	-25	9.0	51	3.5	4	0.8	6687	16.0	5561	35	0.5
08-37.7989-102.8303-2-15-						0-C31244	49700	-0.05	543	104300	56	-62	6.4	33	2.4	5	0.9	14060	8.7	14290	35	0.4
08-37.7961-102.8311-2-11-						0-C31245	39750	-0.07	420	160100	71	-68	7.7	37	2.4	4	0.8	15300	8.1	9413	37	0.4
08-37.8428-102.8081-2-15-						0-C31247	55030	-0.08	805	43850	71	-82	7.0	39	1.9	4	1.0	16920	10.6	17280	47	0.4
08-37.8361-102.8317-2-11-						0-C31249	45290	-0.05	257	7629	81	39	9.0	37	2.6	5	1.0	9809	9.3	6802	44	0.3
08-37.7458-102.8431-2-15-						0-C31252	61950	-0.07	313	128400	58	83	7.3	46	3.5	4	0.7	15360	4.1	11870	29	0.3
08-37.7592-102.8539-2-15-						0-C31253	34960	-0.06	875	170800	103	-77	7.9	52	2.0	5	1.2	29150	14.2	10820	52	0.6
08-37.7892-102.8642-2-15-						0-C31254	42410	-0.07	542	118900	62	-73	6.6	53	3.1	4	1.0	17220	8.5	15120	27	0.4
08-37.8167-102.8728-2-11-						0-C31256	55870	-0.07	465	14380	74	-47	9.1	42	2.9	6	1.0	28710	11.2	12980	45	0.5
08-37.8256-102.8750-2-11-						0-C31257	80730	-0.07	378	3660	73	-47	5.7	52	4.7	5	1.0	16760	10.5	14480	42	0.4
08-37.8164-102.8733-2-11-						0-C31258	13840	-0.04	239	7883	82	44	4.7	15	1.2	6	1.0	5621	11.5	3515	41	0.4
08-37.9086-102.6942-2-15-						0-C31259	63570	-0.08	654	29210	74	-81	8.1	35	3.1	4	1.2	17000	9.7	18070	38	0.5
08-37.8872-102.6356-2-15-						0-C31260	60200	-0.06	726	23040	83	-69	9.8	37	3.4	5	1.1	16550	12.2	20370	44	0.6
08-37.9517-102.6681-2-15-						0-C31261	64710	-0.06	623	37460	77	-70	7.7	37	3.4	5	1.1	16390	9.2	20050	37	0.4
08-37.9922-102.6375-2-15-						0-C31267	65500	-0.11	976	32200	108	-102	11.0	57	4.2	6	1.5	19470	13.3	21510	51	0.7
08-37.9947-102.6764-2-15-						0-C31268	64790	-0.08	656	29260	88	-85	8.6	39	3.2	6	1.2	19560	10.9	20510	45	0.6
08-37.9867-102.7425-2-15-						0-C31269	58650	-0.05	775	20220	99	-71	9.2	40	2.2	6	1.3	17890	16.0	20190	52	0.6
08-37.9183-102.6975-2-15-						0-C31274	63340	-0.06	748	31030	76	-74	7.6	34	2.7	6	1.0	16490	11.4	20170	43	0.5
08-37.3081-102.8031-2-15-						0-C31288	64740	-0.12	785	31760	85	-82	10.2	60	3.2	5	1.1	21900	10.9	18960	44	0.6
08-37.2908-102.8300-2-15-						0-C31289	61340	-0.13	702	11820	74	-91	8.3	41	3.0	4	1.2	16820	11.6	19720		0.6
08-37.2664-102.9806-2-15-						0-C31295	65560	-0.10	721	10070	84	-77	11.2	48	3.4	7		19060	12.6	20570	61	0.6
08-37.3606-102.8867-2-15-						0-C31299	59150	-0.09	692	14910	80	-74	8.2	39	2.1	6	1.2	14900	13.8	24200	33	0.6

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

4

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS (continued)															U/Th RATIO
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)														
							Mg	Mn	Na	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	Ti	V	Yb	
08-37.6850-102.1281-2-12-	0-C31169	10520	391	10300	54	1	6.8	5.3	-252	-1	-1	12.5	3596	64	4.2	92	0.288				
08-37.6625-102.2186-2-11-	0-C31179	6115	692	9333	46	-2	6.3	6.2	-311	-1	1	14.5	6315	109	5.8	-49	0.310				
08-37.9394-102.9008-2-15-	0-C31190	12890	428	8458	59	-3	7.5	5.2	-322	-1	-1	13.1	3912	83	3.8		0.290				
08-37.8803-102.9250-2-15-	0-C31191	9985	367	8222	50	-2	6.8	6.2	-242	-1	1	13.9	4128	65	4.4	71	0.288				
08-37.9119-102.9042-2-15-	0-C31192	13620	355	8004	49	-2	6.9	5.6	-234	-1	1	11.5	3713	73	4.1	-63	0.339				
08-37.8714-102.9297-2-15-	0-C31193	8047	235	7789	34	-2	5.4	7.4	-231	1	1	13.7	4242	52	4.9	73	0.299				
08-37.8722-102.9328-2-15-	0-C31194	9876	374	8343	-24	-2	7.2	5.0	-288	-1		13.0	3324	63	4.2		0.277				
08-37.9014-102.8719-2-15-	0-C31199	10230	313	6835	35	-2	6.8	5.0	482	-1	1	11.7	3147	73	3.9	82	0.359				
08-37.9406-102.8706-2-15-	0-C31200	15250	467	8434	42	-2	7.6	5.3	-268	-1	-1	11.6	3653	75	3.2	104	0.302				
08-37.9425-102.8769-2-15-	0-C31201	12670	439	8429	50	-2	7.2	6.8	-299	-1	-1	13.3	3894	71	5.3	-94	0.271				
08-37.9694-102.8689-2-15-	0-C31202	10950	368	8382	37	-2	6.5	5.9	-286	-1	-1	11.7	3376	59	5.9	43	0.308				
08-37.9644-102.8786-2-12-	0-C31203	11000	313	7761	41	-2	6.0	4.9	518	-1	-1	11.7	3724	60	3.2	-31	0.342				
08-37.9083-102.7939-2-15-	0-C31205	14540	423	9886	55	-2	7.4	5.3	324	-1	1	12.2	3574	77	3.9	87	0.311				
08-37.9211-102.7625-2-15-	0-C31208	13450	249	9047	-27	-2	7.5	4.9	-272	-1	-1	13.3	3201	86	4.9		0.361				
08-37.8386-102.8925-2-11-	0-C31212	6559	247	5949	28	-1	4.8	3.8	-199		-1	9.4	2789	44	3.1	44	0.330				
08-37.8322-102.9261-2-15-	0-C31213	10760	449	9119	57	-2	7.7	5.6	-276	-1		12.4	3707	67	4.0	116	0.290				
08-37.8078-102.9514-2-11-	0-C31214	6716	112	4530	-16	-2	4.2	3.6	-189	-1	-1	9.4	2182	41	3.0	120	0.415				
08-37.8397-102.9472-2-11-	0-C31216	7986	199	3784	50	-2	9.0	5.1	394	-1	-1	14.3	3751	78	3.2	77	0.441				
08-37.7847-102.9367-2-11-	0-C31218	9053	238	7194	36	-2	5.9	6.3	-238	-1	-1	10.6	3231	49	3.8	-72	0.943				
08-37.7714-102.9292-2-15-	0-C31219	12870	446	7722	61	-2	7.8	7.3	-293	-1	-1	13.5	4097	76	4.8	163	0.304				
08-37.7528-102.9367-2-15-	0-C31221	12630	363	5512	40	-2	7.9	5.0	284	-1	1	11.2	3748	79	3.9	114	0.429				
08-37.7633-102.9167-2-15-	0-C31222	8222	271	4069	-22	-2	5.4	3.3	938	-1		8.7	2081	62	3.5	96	0.471				
08-37.8658-102.7728-2-15-	0-C31224	13150	352	8964	38	-2	6.5	4.7	-229	-1	-1	11.1	3408	79	3.3	73	0.369				
08-37.8047-102.7411-2-15-	0-C31226	11920	377	9191	-27	-2	7.1	5.0	-294	-1	-1	10.8	2981	79	4.4		0.361				
08-37.8075-102.7214-2-15-	0-C31228	14520	422	8572	51	-2	7.1	5.3	-255	-1	-1	12.4	3840	80	3.4	-72	0.331				
08-37.7681-102.6817-2-15-	0-C31232	12540	404	7835	55	-2	7.8	6.2	-291	-1	-1	12.6	3493	78	5.0		0.302				
08-37.7756-102.6742-2-12-	0-C31233	8346	449	6690	25	-1	5.5	5.2	396	-1	-1	9.3	3862	62	4.0	58	0.505				
08-37.8383-102.6758-2-12-	0-C31235	17150	513	7518	-25	-2	7.4	6.4	-348	-1	-1	14.1	3488	80	4.3	69	0.312				
08-37.8578-102.6772-2-15-	0-C31236	13740	415	9371	-28	-2	8.0	5.1	-299	-1	-1	12.2	3468	77	3.5	-87	0.295				
08-37.8047-102.8369-2-11-	0-C31243	3308	35	800	-16	-2	6.4	5.3	136	-1	-1	12.3	4068	43	4.3	76	0.577				
08-37.7989-102.8303-2-15-	0-C31244	11130	330	6088	30	-2	5.8	4.5	577	-1	-1	9.3	3039	70	4.7	47	0.484				
08-37.7961-102.8311-2-11-	0-C31245	11280	227	4098	24	-2	5.8	4.8	700	-1		9.8	2363	72	3.0	97	0.500				
08-37.8428-102.8081-2-15-	0-C31247	12930	352	9792	43	-2	7.1	5.3	-286	-1		13.2	3053	73	5.3		0.280				
08-37.8361-102.8317-2-11-	0-C31249	7093	95	1889	-16	-2	5.6	6.2	374	-1	1	10.9	2983	43	3.4	86	0.459				
08-37.7458-102.8431-2-15-	0-C31252	14410	153	1935	-23	-2	7.6	4.2	454	-1		12.0	2959	96	2.4	70	0.458				
08-37.7592-102.8539-2-15-	0-C31253	7433	677	5175	-21	-2	6.3	8.3	727	-1	-1	16.5	5945	114	4.8	-66	0.345				
08-37.7892-102.8642-2-15-	0-C31254	10570	338	5322	-25	-2	7.0	5.2	572	-1		13.5	2872	87	3.5	-86	0.378				
08-37.8167-102.8728-2-11-	0-C31256	9357	187	4300	44	-2	8.0	7.0	499	-1	-1	14.5	3561	83	4.1	100	0.745				
08-37.8256-102.8750-2-11-	0-C31257	8174	107	3623	56	-2	9.6	5.1	490	-1	-1	12.9	4216	87	3.5	-31	0.450				
08-37.8164-102.8733-2-11-	0-C31258	2450	58	1441	-15	-1	1.9	6.3	-119	-1	-1	11.5	1682	13	3.2	63	0.200				
08-37.9086-102.6942-2-15-	0-C31259	13250	339	9149	51	-2	7.7	5.7	-280	-1	-1	12.5	3345	74	3.1		0.288				
08-37.8872-102.6356-2-15-	0-C31260	12350	408	9915	45	-2	7.3	6.1	366	-1	-1	14.5	3720	66	4.4	62	0.241				
08-37.9517-102.6631-2-15-	0-C31261	17300	398	8847	44	-2	7.4	6.3	-261	-1	-1	11.8	3727	78	3.3	97	0.339				
08-37.9922-102.6375-2-15-	0-C31267	12870	458	10390	55	-3	8.1	8.0	-365	-1	-1	16.4	3462	77	3.5	-66	0.226				
08-37.9947-102.6764-2-15-	0-C31268	15390	427	9754	55	-2	8.2	6.4	-312	-1	-1	14.6	4070	77	4.7	112	0.260				
08-37.9867-102.7425-2-15-	0-C31269	12650	440	10390	43	-2	7.4	6.8	-255	-1		16.1	3592	74	4.9	77	0.248				
08-37.9183-102.6975-2-15-	0-C31274	14600	415	10020	-20	-2	7.1	5.3	-258	-1	-1	11.2	3690	77	4.0	103	0.321				
08-37.3081-102.8031-2-15-	0-C31288	14160	620	7712	36	-4	8.7	5.7	-343	-1	1	13.0	4341	96	5.2	111	0.254				
08-37.2908-102.8300-2-15-	0-C31289	9518	627	9742	57	-4	7.8	4.4	-365	-1		11.7	3911	83	4.3		0.308				
08-37.2664-102.9806-2-15-	0-C31295	13980	586	9321	47	-3	8.7	6.3	-307	1	-1	14.7	4582	84	3.9	106	0.259				
08-37.3606-102.8867-2-15-	0-C31299	10930	573	9406	43	-3	6.9	6.7	-299	1		13.1	4561	88	4.9	96	0.275				

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

①

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																				U CONCENTRATION									
STATE	LATITUDE	LONGITUDE	DOE LAS	SAMPLE TYPE	REPLICATE	LAS SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SCINTILLOMETER (c/L ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	SEDIMENT SAMPLES ANALYZED BY DELAYED NEUTRON COUNTING (DNC)	UNITS IN ppm
							DATE	HOUR																											
08-37.3522-102.9647-2-15-	0-C31300-09/08/77-19-	27-	-C-	-	-	23-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30		
08-37.3428-102.9600-2-15-	0-C31301-09/08/77-19-	27-	-C-	-	-	14-1-1-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.90	
08-37.2456-102.5933-2-12-	0-C31322-09/17/77-13-	30-	-C-	-	-	5-1-1-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.40	
08-37.2497-102.5397-2-12-	0-C31323-09/17/77-13-	30-	-C-	-	-	7-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.90	
08-37.2203-102.6828-2-11-	0-C31325-09/17/77-14-	30-	-C-	-	-	8-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.40	
08-37.2244-102.7258-2-12-	0-C31327-09/17/77-15-	30-	-C-	-	-	8-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
08-37.2206-102.7250-2-12-	0-C31328-09/17/77-15-	30-	-C-	-	-	12-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
08-37.2306-102.6356-2-11-	0-C31334-09/18/77-14-	26-	-C-	-	-	7-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00	
08-37.0697-102.6356-2-12-	0-C31340-09/18/77-10-	23-	-C-	-	-	7-1-1-6-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.10	
08-37.0689-102.6464-2-11-	0-C31341-09/18/77-10-	23-	-C-	-	-	5-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	
08-37.0047-102.6844-2-12-	0-C31349-09/18/77-15-	26-	-C-	-	-	13-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
08-37.0056-102.6878-2-12-	0-C31350-09/18/77-16-	26-	-C-	-	-	8-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.20	
08-37.1064-102.6103-2-12-	0-C31355-09/20/77-10-	29-	-C-	-	-	22-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.30	
08-37.0067-102.5825-2-11-	0-C31366-09/20/77-18-	30-	-C-	-	-	7-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.40	
08-37.0014-102.5847-2-11-	0-C31367-09/20/77-18-	30-18.5-	-C-	-	7.8-	16-1-1-6-8-2-2-1-3-4-4-3-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.50		
08-37.0728-102.5950-2-11-	0-C31369-09/21/77-10-	32-	-C-	-	-	6-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.40	
08-37.0700-102.6019-2-11-	0-C31370-09/21/77-11-	32-	-C-	-	-	3-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.40	
08-37.2044-102.7794-2-12-	0-C31375-09/21/77-16-	31-	-C-	-	-	8-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30	
08-37.2028-102.8339-2-11-	0-C31380-09/21/77-20-	19-	-C-	-	-	9-1-1-6-4-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
08-37.2092-102.7792-2-12-	0-C31382-09/21/77-20-	18-	-C-	-	-	11-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
08-37.4386-102.9389-2-12-	0-C31387-09/01/77-18-	27-22.5-	-C-	-	6.8-	13-1-1-4-6-1-4-2-2-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.00		
08-37.4881-102.9375-2-12-	0-C31389-09/02/77-10-	27-19.5-	-C-	-	6.9-	13-1-1-5-6-1-1-2-2-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.20		
08-37.4258-102.9872-2-15-	0-C31391-09/02/77-11-	27-	-C-	-	-	17-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.70	
08-37.3867-102.8306-2-15-	0-C31396-09/02/77-16-	28-	-C-	-	-	14-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.10	
08-37.4553-102.8364-2-11-	0-C31400-09/02/77-18-	26-22.0-	-C-	-	7.0-	12-1-1-4-6-1-2-2-	-4-3-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.40		
08-37.4308-102.7642-2-15-	0-C31407-09/03/77-14-	30-	-C-	-	-	13-1-1-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.60	
08-37.4053-102.7439-2-15-	0-C31409-09/03/77-16-	27-	-C-	-	-	23-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30	
08-37.4939-102.5306-2-15-	0-C31426-09/04/77-18-	24-	-C-	-	-	10-1-1-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.30	
08-37.4100-102.5300-2-15-	0-C31432-09/05/77-12-	25-	-C-	-	-	10-1-1-4-3-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.40	
08-37.4064-102.5739-2-11-	0-C31435-09/05/77-17-	31-15.5-	-C-	-	6.9-	18-1-2-4-6-2-3-1-2-3-4-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.30		
08-37.4258-102.5939-2-12-	0-C31436-09/05/77-18-	25-23.0-	-C-	-	7.1-	13-1-2-4-1-1-3-2-2-3-4-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.20		
08-37.4289-102.5800-2-11-	0-C31437-09/05/77-19-	22-21.0-	-C-	-	7.0-	13-1-2-4-6-1-2-2-2-3-5-3-1-	-9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.30		
08-37.3644-102.5325-2-15-	0-C31440-09/06/77-11-	27-	-C-	-	-	14-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20	
08-37.3214-102.5069-2-15-	0-C31443-09/06/77-12-	29-	-C-	-	-	13-1-1-6-4-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20	
08-37.2956-102.6717-2-15-	0-C31458-09/07/77-11-	28-	-C-	-	-	13-1-1-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30	
08-37.2828-102.7422-2-15-	0-C31463-09/07/77-13-	-	-C-	-	-	5-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
08-37.3575-102.7597-2-15-	0-C31479-09/08/77-13-	33-	-C-	-	-	13-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.90	
08-37.3297-102.8167-2-15-	0-C31480-09/08/77-13-	33-	-C-	-	-	18-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80	
08-37.0735-102.8517-2-11-	0-C31483-09/12/77-14-	27-	-C-	-	-	7-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.30	
08-37.0697-102.8550-2-11-	0-C31484-09/12/77-15-	27-	-C-	-	-	12-1-1-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.90	
08-37.0197-102.8542-2-11-	0-C31486-09/12/77-16-	28-21.0-	-C-	-	7.2-	10-1-6-4-7-2-2-1-2-6-5-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.30		
08-37.0019-102.8436-2-11-	0-C31487-09/12/77-17-	29-20.5-	-C-	-	7.4-	7-1-1-3-5-1-3-1-2-4-3-4-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.30		
08-37.0108-102.8297-2-11-	0-C31488-09/12/77-17-	29-	-C-	-	-	9-1-1-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.70	
08-37.0475-102.8358-2-111																																			

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE									ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY		
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)									Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li
08-37.3522-102.9647-2-15-						0-C31300	-5	-5	-5	22	-20	-15	12	-10	-15	1	19
08-37.3428-102.9600-2-15-						0-C31301	-5	-5	-5	25	-20	-15	11	-10	-15	2	24
08-37.2456-102.5933-2-12-						0-C31322	-5	-5	-5	-10	-20	27	10	-10	-15	1	11
08-37.2497-102.5397-2-12-						0-C31323	-5	-5	-5	18	40	21	8	-10	-15	1	22
08-37.2203-102.6828-2-11-						0-C31325	-5	-5	-5	12	-20	-15	16	-10	-15	2	20
08-37.2244-102.7258-2-12-						0-C31327	-5	-5	-5	12	-20	-15	9	-10	-15	2	24
08-37.2206-102.7250-2-12-						0-C31328	-5	-5	-5	-10	-20	-15	11	-10	-15	2	23
08-37.2306-102.6356-2-11-						0-C31334	-5	-5	-5	21	23	-15	14	-10	-15	2	15
08-37.0697-102.6356-2-12-						0-C31340	-5	-5	-5	-10	38	-15	-5	-10	19	2	5
08-37.0689-102.6464-2-11-						0-C31341	-5	-5	-5	17	-20	-15	17	-10	-15	1	15
08-37.0047-102.6844-2-12-						0-C31349	-5	-5	-5	-10	-20	-15	11	-10	-15	2	16
08-37.0056-102.6878-2-12-						0-C31350	-5	-5	-5	20	20	-15	5	-10	-15	1	18
08-37.1064-102.6103-2-12-						0-C31355	-5	-5	-5	20	-20	-15	21	-10	-15	2	17
08-37.0067-102.5825-2-11-						0-C31366	-5	-5	-5	-10	28	-15	-5	-10	-15	1	11
08-37.0014-102.5847-2-11-						0-C31367	-5	-5	-5	15	-20	-15	8	-10	-15	1	20
08-37.0728-102.5950-2-11-						0-C31369	-5	-5	-5	16	-20	-15	-5	-10	-15	1	14
08-37.0700-102.6019-2-11-						0-C31370	-5	-5	-5	-10	-20	-15	9	-10	-15	1	19
08-37.2044-102.7794-2-12-						0-C31375	-5	-5	-5	20	-20	-15	22	-10	-15	2	32
08-37.2028-102.8339-2-11-						0-C31380	-5	-5	-5	16	26	-15	12	-10	-15	2	27
08-37.2092-102.7792-2-12-						0-C31382	-5	-5	-5	19	-20	15	16	-10	-15	1	14
08-37.4386-102.9389-2-12-						0-C31387	-5	-5	-5	23	-20	-15	-5	-10	-15	1	17
08-37.4881-102.9375-2-12-						0-C31389	-5	-5	-5	17	-20	-15	7	-10	-15	1	29
08-37.4258-102.9872-2-15-						0-C31391	-5	-5	-5	13	-20	18	7	-10	-15	2	33
08-37.3867-102.8306-2-15-						0-C31396	-5	-5	-5	23	-20	-15	-5	-10	-15	1	25
08-37.4553-102.8364-2-11-						0-C31400	-5	-5	-5	-10	-20	29	-5	-10	-15	1	15
08-37.4308-102.7642-2-15-						0-C31407	-5	-5	-5	15	-20	-15	14	-10	-15	2	21
08-37.4053-102.7439-2-15-						0-C31409	-5	-5	-5	10	-20	20	13	-10	-15	2	22
08-37.4939-102.5306-2-15-						0-C31426	-5	-5	-5	18	-20	21	14	-10	-15	2	22
08-37.4100-102.5300-2-15-						0-C31432	-5	-5	-5	-10	61	18	12	-10	-15	1	4
08-37.4064-102.5739-2-11-						0-C31435	-5	-5	-5	-10	-20	-15	-5	-10	20	2	13
08-37.4258-102.5939-2-12-						0-C31436	-5	-5	-5	11	-20	-15	14	-10	-15	1	16
08-37.4289-102.5800-2-11-						0-C31437	-5	-5	-5	-10	-20	-15	7	-10	-15	1	15
08-37.3644-102.5325-2-15-						0-C31440	-5	-5	-5	13	-20	-15	6	-10	-15	2	19
08-37.3214-102.5069-2-15-						0-C31443	-5	5	-5	28	-20	-15	17	-10	-15	2	21
08-37.2956-102.6717-2-15-						0-C31458	-5	-5	-5	-10	33	-15	12	-10	-15	2	24
08-37.2828-102.7422-2-15-						0-C31463	-5	-5	-5	25	-20	-15	7	-10	-15	1	22
08-37.3575-102.7597-2-15-						0-C31479	-5	-5	-5	16	-20	-15	5	-10	-15	2	21
08-37.3297-102.8167-2-15-						0-C31480	-5	-5	-5	18	-20	21	9	-10	-15	1	28
08-37.0736-102.8517-2-11-						0-C31483	-5	-5	-5	16	-20	-15	-5	22	-15	2	4
08-37.0697-102.8550-2-11-						0-C31484	-5	-5	-5	-10	-20	-15	11	-10	-15	1	8
08-37.0197-102.8542-2-11-						0-C31486	-5	-5	-5	12	-20	-15	7	-10	-15	1	20
08-37.0019-102.8436-2-11-						0-C31487	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	15
08-37.0108-102.8297-2-11-						0-C31488	-5	-5	-5	10	28	-15	14	-10	-15	2	9
08-37.0475-102.8358-2-11-						0-C31489	-5	-5	-5	-10	-20	-15	6	-10	-15	1	11
08-37.2228-102.7519-2-15-						0-C31492	-5	-5	-5	20	-20	-15	17	-10	-15	2	24
08-37.0228-102.7742-2-11-						0-C31498	-5	-5	-5	18	-20	-15	12	-10	-15	1	21
08-37.0000-102.7728-2-15-						0-C31499	-5	-5	-5	-10	-20	-15	7	-10	-15	1	14
08-37.0383-102.8231-2-15-						0-C31501	-5	-5	-5	14	-20	16	5	-10	25	1	5
08-37.0725-102.9961-2-11-						0-C31504	-5	-5	-5	19	-20	-15	9	-10	-15	1	23
08-37.0853-102.9336-2-15-						0-C31507	-5	-5	-5	10	37	36	5	-10	-15	2	6
08-37.0628-102.9094-2-15-						0-C31508	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	11

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS																
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu
08-37.3522-102.9647-2-15-			0-C31300			64250	-0.11		821	12400	88	-82	8.2	42	2.4	5	1.1	15740	10.5	23010	43	0.5
08-37.3428-102.9600-2-15-			0-C31301			62960	-0.13		710	17140	82	-87	8.2	39	2.7	5	1.2	18420	12.0	16730	48	0.5
08-37.2456-102.5933-2-12-			0-C31322			49020	-0.09		663	11190	73	-77	8.6	49	2.9	6	1.0	25130	19.2	17870	31	0.9
08-37.2497-102.5397-2-12-			0-C31323			54930	-0.10		885	23110	95	-77	8.2	55	2.1	6	1.0	26870	14.6	16930	48	0.6
08-37.2203-102.6828-2-11-			0-C31325			51050	-0.09		814	7141	83	-85	6.9	52	2.5	6	1.1	20520	21.2	21830	49	0.9
08-37.2244-102.7258-2-12-			0-C31327			61230	-0.14		714	11850	69	-89	8.1	39	3.0	5	1.0	16030	9.4	21500		0.3
08-37.2206-102.7250-2-12-			0-C31328			63470	-0.10		742	15740	66	-72	9.8	48	3.0	5	0.9	18600	9.9	22330	42	0.6
08-37.2306-102.6356-2-11-			0-C31334			58920	-0.10		826	9275	74	-79	7.5	40	2.6	6	1.0	23720	15.7	19520	47	0.7
08-37.0697-102.6356-2-12-			0-C31340			30650	-0.12		435	11100	114	-112	9.6	122	-1.5	8	1.1	82460	53.4	17510	90	2.3
08-37.0689-102.6464-2-11-			0-C31341			49350	-0.11		725	8091	58	-85	5.5	32	-1.3	5	0.9	16580	16.7	21240	48	0.8
08-37.0047-102.6844-2-12-			0-C31349			51050	-0.07		747	6961	49	-69	6.6	32	2.0	4	0.8	12570	13.7	22230	27	
08-37.0056-102.6878-2-12-			0-C31350			54100	-0.07		804	13290	39	-68	5.3	23	1.6	4	0.6	9550	7.0	21650		0.3
08-37.1064-102.6103-2-12-			0-C31355			61410	-0.12		706	48730	99	-85	10.2	51	3.0	6	1.2	28760	15.2	15350	52	0.9
08-37.0067-102.5825-2-11-			0-C31366			38420	-0.07		606	10860	58	-61	6.5	46	1.4	5	1.2	18010	24.6	14930	40	0.8
08-37.0014-102.5847-2-11-			0-C31367			50120	-0.09		641	8298	49	-62	5.6	31	2.6	4	0.8	10380	9.7	16410	35	0.4
08-37.0728-102.5950-2-11-			0-C31369			54690	-0.10		799	24080	79	-91	8.7	44	-1.3	5	1.1	19100	17.6	18620		0.9
08-37.0700-102.6019-2-11-			0-C31370			49320	-0.09		753	9123	39	-78	5.0	25	-1.2	3	0.7	11020	8.5	19670		0.4
08-37.2044-102.7794-2-12-			0-C31375			67720	-0.10		621	17340	78	-72	10.6	46	3.8	5	1.1	19100	9.2	21050	63	0.5
08-37.2028-102.8339-2-11-			0-C31380			72080	-0.11		598	17810	73	-80	8.7	45	3.7	6	1.1	17730	6.5	20450	37	0.4
08-37.2092-102.7792-2-12-			0-C31382			64090	-0.11		843	34040	73	-82	8.5	42	3.0	5	1.0	16380	9.3	22110	46	0.5
08-37.4386-102.9389-2-12-			0-C31387			54390	-0.07		677	91300	81	-69	9.3	43	3.3	5	1.2	16500	10.3	16870	41	0.5
08-37.4881-102.9375-2-12-			0-C31389			55960	-0.09		482	97060	67	-82	8.4	40	3.5	4	0.9	16270	6.7	14740	26	0.4
08-37.4258-102.9872-2-15-			0-C31391			57300	-0.06		557	31030	79	-62	10.5	59	3.1	5	1.0	19610	9.8	19090	46	0.5
08-37.3867-102.8306-2-15-			0-C31396			60530	-0.06		729	30800	95	-76	7.9	41	3.3	6	1.1	20560	15.1	20020	51	0.5
08-37.4553-102.8364-2-11-			0-C31400			39820	-0.07		517	221300	55	-76	7.8	29	1.9	4	1.0	13600	5.2	10160	34	0.3
08-37.4308-102.7642-2-15-			0-C31407			55030	-0.08		750	49170	92	-87	8.0	41	2.3	5	1.0	18850	13.1	17360	56	0.6
08-37.4053-102.7439-2-15-			0-C31409			60100	-0.06		636	24410	72	-71	9.9	44	3.7	5	1.1	17650	10.4	21200	39	0.4
08-37.4939-102.5306-2-15-			0-C31426			53720	-0.06		628	36340	62	-59	7.0	31	2.8	5	1.0	15620	9.0	14620	39	0.4
08-37.4100-102.5300-2-15-			0-C31432			28220	-0.07		607	22160	309	-96	10.3	106	-1.4	14	2.4	57320	70.8	12060	147	2.0
08-37.4064-102.5739-2-11-			0-C31435			51540	-0.09		393	7011	93	-53	12.9	54	3.5	5	1.3	10030	15.0	12480	51	0.5
08-37.4258-102.5939-2-12-			0-C31436			40860	-0.05		636	44210	81	-63	8.3	43	1.9	5	1.1	18540	17.5	13670	43	0.6
08-37.4289-102.5800-2-11-			0-C31437			41970	-0.05		582	32370	63	-52	5.4	38	2.0	5	1.0	10880	9.1	11530	36	0.4
08-37.3644-102.5325-2-15-			0-C31440			64540	-0.07		593	25080	118	-84	10.8	58	3.8	7	1.3	24050	16.2	15930	60	0.8
08-37.3214-102.5069-2-15-			0-C31443			69070	-0.09		630	24990	74	-83	9.5	52	3.6	4	1.0	20890	6.6	18030	35	0.4
08-37.2956-102.6717-2-15-			0-C31458			58880	-0.06		676	20380	78	-73	10.3	47	3.2	5	1.1	16640	11.8	20170	50	0.5
08-37.2828-102.7422-2-15-			0-C31463			58190	-0.06		753	22140	75	-72	7.1	38	2.9	6	1.0	17380	12.6	18700	40	0.5
08-37.3575-102.7597-2-15-			0-C31479			56030	-0.06		671	30770	100	-81	8.8	54	2.2	6	1.3	21260	18.1	18630	49	0.7
08-37.3297-102.8167-2-15-			0-C31480			56330	-0.08		663	27410	91	-83	8.0	46	2.7	5	1.2	20180	15.8	17610	41	0.5
08-37.0736-102.8517-2-11-			0-C31483			33310	-0.20		552	10870	119	-101	11.9	137	-1.4	8	1.9	106200	46.9	11890	69	1.7
08-37.0697-102.8550-2-11-			0-C31484			45280	-0.06		857	10640	68	-90	7.7	65	-1.2	5	1.2	36860	24.7	17050	37	1.0
08-37.0197-102.8542-2-11-			0-C31486			51150	-0.07		705	19890	46	-77	5.8	36	2.8	5	1.1	12110	10.8	15540	38	0.5
08-37.0019-102.8436-2-11-			0-C31487			44270	-0.06		490	31410	55	-54	9.0	36	2.9	4	0.8	12360	9.5	10470	37	0.4
08-37.0108-102.8297-2-11-			0-C31488			42790	-0.05		624	11410	84	-72	7.8	76	-1.2	6	1.3	51960	27.9	16220	50	0.9
08-37.0475-102.8358-2-11-			0-C31489			38210	-0.05		385	6017	61	-59	6.5	33	1.5	4	0.9	9782	15.9	11930	31	0.5
08-37.2228-102.7519-2-15-			0-C31492			60100	-0.09		616	17540	89	-84	10.0	46	3.6	4	1.4	21020	15.4	20830	42	0.6
08-37.0228-102.7742-2-11-			0-C31498			53970	-0.06		558	8492	73	-63	9.6	44	2.4	5	1.1	14830	12.5	15640	42	0.5
08-37.0000-102.7728-2-15-			0-C31499			40660	-0.05		407	5279	51	-49	6.2	32	1.6	4	0.8	10240	12.9	10200	29	0.4
08-37.0383-102.8231-2-15-			0-C31501			34230	-0.06		505	7783	111	-81	10.0	103	2.0	5	1.1	78560	34.2	14370	55	1.1
08-37.0725-102.9961-2-11-			0-C31504			45110	-0.07		541	39950	44	-59	6.0	31	-1.4	3	1.0	13010	8.4	12680	31	0.4
08-37.0853-102.9336-2-15-			0-C31507			39540	-0.06		696	9723	117	65	11.0	103	1.1	7	1.9	71980	37.6	17220	55	1.5
08-37.0628-102.9094-2-15-			0-C31508			36950	-0.04		544	8279	50	-57	4.6	35	1.3	5	0.8	15500	16.2	12360	22	0.5

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

4

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS (continued)															U/Th RATIO	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Mg	Mn	Na	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	Ti	V	Yb		Zn
08-37.3522-102.9647-2-15-	0-C31300	14820	464	10360	40	-3	7.1	5.2	-308	-1	-1	12.5	4290	69	5.0	74	0.264					
08-37.3428-102.9600-2-15-	0-C31301	12920	509	9370	42	-4	7.9	5.3	-335	-1	-1	12.7	3952	83	5.0	109	0.307					
08-37.2456-102.5933-2-12-	0-C31322	7779	921	9325	49	-3	7.2	5.5	-319	1	-1	12.5	5713	96	5.4	59	0.352					
08-37.2497-102.5397-2-12-	0-C31323	13920	759	9466	47	-3	7.5	6.6	-311	-1	-1	16.2	7193	116	4.4	107	0.426					
08-37.2203-102.6828-2-11-	0-C31325	-3655	653	10670	36	-3	5.9	5.7	-323	-1	-1	11.9	5389	82	5.5	70	0.370					
08-37.2244-102.7258-2-12-	0-C31327	15110	510	9200	50	-4	7.5	3.9	-344	-1	-1	9.8	3119	81	3.7	-49	0.367					
08-37.2206-102.7250-2-12-	0-C31328	11830	547	8979	59	-3	7.8	5.0	-283	-1	-1	10.7	3865	84	4.4	64	0.290					
08-37.2306-102.6356-2-11-	0-C31334	7555	725	9366	39	-3	7.2	5.5	-325	-1	1	11.8	5625	106	4.7	101	0.339					
08-37.0697-102.6356-2-12-	0-C31340	-5104	1927	6641	-26	-3	9.7	8.8	-490	2	-1	21.3	10420	245	15.3	-82	0.521					
08-37.0689-102.6464-2-11-	0-C31341	-3802	495	10930	50	-3	5.2	3.6	-313	-1		6.8	3645	66	5.3	-66	0.544					
08-37.0047-102.6844-2-12-	0-C31349	4223	355	11880	40	-2	5.0	3.8	-237		-1	9.2	3409	55		55	0.326					
08-37.0056-102.6878-2-12-	0-C31350	6924	254	11640	42	-2	4.3	3.4	-217	-1		5.9	1983	42	2.6	87	0.373					
08-37.1064-102.6103-2-12-	0-C31355	16400	841	6572	47	-4	8.8	6.2	-381	2	-1	14.0	4923	110	6.4	142	0.307					
08-37.0067-102.5825-2-11-	0-C31366	4251	421	8429	33	-2	5.1	4.5	-225	1		11.0	4602	67	5.1	47	0.400					
08-37.0014-102.5847-2-11-	0-C31367	8795	170	8162	35	-3	5.5	3.8	-203	-1		8.3	3349	58	3.5	102	0.663					
08-37.0728-102.5950-2-11-	0-C31369	9667	632	10470	42	-3	7.2	5.6	-344	-1	1	10.4	4041	80	6.3	74	0.423					
08-37.0700-102.6019-2-11-	0-C31370	-3461	363	10890	51	-3	4.3	2.7	-262	-1		5.3	2594	46	3.3	-54	0.453					
08-37.2044-102.7794-2-12-	0-C31375	13330	534	8284	61	-3	8.6	6.2	-291	-1	-1	12.5	4192	84	2.8	92	0.264					
08-37.2028-102.8339-2-11-	0-C31380	18550	558	8782	72	-4	8.5	5.5	-313	-1	-1	11.2	4139	95	3.4	104	0.321					
08-37.2092-102.7792-2-12-	0-C31382	12810	511	8803	53	-3	7.4	4.9	-312	-1		11.7	3598	78	5.5	127	0.256					
08-37.4386-102.9389-2-12-	0-C31387	14080	391	6806	44	-2	7.5	5.6	417	-1	-1	11.8	3682	97	4.0	-54	0.847					
08-37.4881-102.9375-2-12-	0-C31389	15280	364	5455	-31	-3	7.4	3.9	743	-1	-1	10.1	2251	104	2.9	91	0.515					
08-37.4258-102.9872-2-15-	0-C31391	15940	410	6636	65	-2	8.2	6.1	292	-1	1	14.4	3450	90	4.2	80	0.326					
08-37.3867-102.8306-2-15-	0-C31396	15070	695	8409	48	-2	7.5	6.5	-304	-1	-1	15.9	5068	105	4.3	85	0.321					
08-37.4553-102.9364-2-11-	0-C31400	10430	309	3605	35	-2	5.8	3.9	821	-1	-1	8.8	2271	102	4.0	-57	0.614					
08-37.4308-102.7642-2-15-	0-C31407	8363	517	8700	-25	-2	7.6	6.7	-328	-1	-1	14.6	4182	89	4.4		0.384					
08-37.4053-102.7439-2-15-	0-C31409	12520	511	8342	35	-2	7.7	5.4	-280	1	-1	12.8	3954	78	3.9	100	0.258					
08-37.4939-102.5306-2-15-	0-C31426	13360	315	6039	-18	-2	6.6	4.6	-224	-1		9.5	3800	75	3.6	69	0.453					
08-37.4100-102.5300-2-15-	0-C31432	-4650	1691	5031	45	-2	9.8	27.5	-460	4	3	57.2	18990	193	15.4	73	0.182					
08-37.4064-102.5739-2-11-	0-C31435	6477	227	2748	-28	-3	8.9	5.3	-253	-1	-1	13.9	6156	71	3.9		0.381					
08-37.4258-102.5939-2-12-	0-C31436	7123	493	7025	-16	-2	6.0	6.5	-251	-1	-1	13.4	5630	75	4.9	70	0.388					
08-37.4239-102.5800-2-11-	0-C31437	8437	365	4002	36	-2	5.1	4.8	-229	-1	-1	8.9	3368	67	3.6	-44	0.483					
08-37.3644-102.5325-2-15-	0-C31440	14160	690	7710	-24	-2	8.6	8.3	-361	-1	-1	17.2	5495	93	5.9	-106	0.244					
08-37.3214-102.5069-2-15-	0-C31443	16020	505	7012	59	-3	9.5	5.1	-350	-1		14.6	3470	84	4.6	97	0.288					
08-37.2956-102.6717-2-15-	0-C31453	13970	496	8809	46	-2	7.7	5.9	-286	-1		13.2	4151	77	4.0	92	0.250					
08-37.2828-102.7422-2-15-	0-C31463	7636	550	8988	47	-2	6.9	5.2	-283	1		11.2	4904	80	4.4	83	0.313					
08-37.3575-102.7597-2-15-	0-C31479	11380	623	8182	48	-2	7.4	8.4	-324	1	-1	16.4	5067	94	5.6	126	0.238					
08-37.3297-102.8167-2-15-	0-C31480	13770	543	8336	48	-2	7.6	5.6	-333	-1	-1	13.8	4178	88	4.8	64	0.275					
08-37.0736-102.8517-2-11-	0-C31483	-4639	1733	8411	-25	-2	9.9	8.7	-415	3	-1	22.6	12600	314	12.7	67	0.500					
08-37.0697-102.8550-2-11-	0-C31484	4653	723	13320	-19	-2	5.8	4.9	-331	1		10.1	5665	120	6.7	78	0.485					
08-37.0197-102.8542-2-11-	0-C31486	10650	195	9676	36	-2	5.9	3.1	-245	-1	-1	7.9	3589	57	3.1	-52	0.544					
08-37.0019-102.8436-2-11-	0-C31487	9240	248	4649	33	-2	5.9	4.6	-225	1		9.6	3373	57	3.2	67	0.448					
08-37.0108-102.8297-2-11-	0-C31488	4700	773	9839	41	-2	6.4	6.7	-284	2	-1	16.3	7243	174	5.9	-25	0.472					
08-37.0475-102.8358-2-11-	0-C31489	5044	195	6328	30	-2	4.8	4.0	-214	-1	-1	8.5	3412	46	4.1	89	0.494					
08-37.2228-102.7519-2-15-	0-C31492	10090	556	8107	-29	-3	8.3	4.8	-354	-1	-1	12.3	4134	90	4.3	-47	0.293					
08-37.0228-102.7742-2-11-	0-C31493	9342	337	6744	47	-2	7.2	5.4	252	-1	-1	11.2	4488	73	4.0	76	0.339					
08-37.0000-102.7728-2-15-	0-C31499	6767	320	4654	30	-1	5.3	3.5	-197	-3		7.9	3544	53	2.6	-129	0.418					
08-37.0383-102.8231-2-15-	0-C31501	5810	903	8106	-24	-2	6.8	7.4	-335	3	1	18.9	7377	214	8.9	109	0.349					
08-37.0725-102.9961-2-11-	0-C31504	12920	354	3590	44	-2	6.2	3.7	-256	-1		8.9	3099	62	3.5		0.528					
08-37.0853-102.9336-2-15-	0-C31507	-3790	1067	11050	-22	-2	7.9	8.2	-336	3	2	18.3	8474	218	9.8	56	0.443					
08-37.0628-102.9094-2-15-	0-C31508	4556	358	8404	31	-1	4.2	3.3	-204	-1	1	6.5	3516	70	3.7	56	0.523					

[illegible]

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE										ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY		
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB. SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)										Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li	
08-37.0328-102.9078-2-15-						0-C31509	-5	-5	-5	-10	-20	-15	8	-10	-15	-1	11	
08-37.0386-102.8958-2-15-						0-C31510	-5	-5	-5	22	-20	-15	-5	-10	-15	1	19	
08-37.0300-102.9911-2-15-						0-C31513	-5	-5	-5	-10	-20	-15	-5	-10	-15	-1	12	
08-37.0275-102.9875-2-12-						0-C31514	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	15	
08-37.0011-102.9761-2-12-						0-C31515										-1		
08-37.0750-102.8383-2-15-						0-C31519	-5	-5	-5	-10	60	-15	-5	-10	20	2	3	
08-37.0175-102.8783-2-15-						0-C31521	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	4	
08-37.6631-102.9617-2-15-						0-C31525	-5	-5	-5	29	-20	33	9	-10	-15	1	44	
08-37.6483-102.9119-2-15-						0-C31527	-5	-5	-5	11	-20	-15	8	-10	-15	1	9	
08-37.1306-102.8831-2-15-						0-C31528	-5	-5	-5	32	-20	-15	11	-10	-15	2	27	
08-37.1864-102.9189-2-15-						0-C31530	-5	-5	-5	30	-20	31	21	-10	-15	2	26	
08-37.2089-102.9119-2-15-						0-C31532	-5	-5	-5	25	-20	-15	14	-10	15	2	21	
08-37.2244-102.9414-2-15-						0-C31535	-5	-5	-5	-10	-20	-15	12	-10	-15	2	19	
08-37.6522-102.8972-2-15-						0-C31539	-5	-5	-5	19	-20	-15	15	-10	-15	2	20	
08-37.7019-102.9372-2-15-						0-C31541	-5	-5	-5	30	-20	-15	9	-10	-15	1	16	
08-37.7275-102.8750-2-15-						0-C31542	-5	-5	-5	12	-20	-15	8	-10	-15	1	16	
08-37.6772-102.9392-2-15-						0-C31546	-5	-5	-5	18	22	-15	6	-10	-15	-1	15	
08-37.3997-102.4731-2-11-						0-C31547	-5	-5	-5	17	20	-15	8	-10	-15	1	11	
08-37.3969-102.4525-2-11-						0-C31549	-5	-5	-5	12	-20	-15	6	-10	-15	2	26	
08-37.4100-102.4872-2-11-						0-C31550	-5	-5	-5	10	-20	-15	14	-10	-15	2	33	
08-37.4603-102.4736-2-15-						0-C31551	-5	-5	-5	26	-20	-15	13	-10	-15	2	22	
08-37.4764-102.4911-2-15-						0-C31553	-5	-5	-5	12	-20	16	9	-10	-15	2	26	
08-37.4900-102.4497-2-11-						0-C31555	-5	-5	-5	29	-20	21	14	-10	-15	2	29	
08-37.4878-102.4517-2-15-						0-C31556	-5	-5	-5	-10	-20	-15	6	-10	-15	2	28	
08-37.4828-102.4014-2-15-						0-C31557	-5	-5	-5	18	-20	20	12	-10	-15	2	23	
08-37.3992-102.4017-2-15-						0-C31561	-5	-5	-5	14	-20	-15	7	-10	-15	2	22	
08-37.4486-102.2561-2-11-						0-C31570	-5	-5	-5	15	-20	-15	11	-10	-15	1	19	
08-37.4767-102.2736-2-15-						0-C31571	-5	-5	-5	10	29	-15	-5	-10	-15	1	29	
08-37.4950-102.2669-2-15-						0-C31572	-5	-5	-5	21	-20	-15	10	-10	-15	1	17	
08-37.4875-102.2950-2-11-						0-C31573	-5	-5	-5	20	-20	19	-5	-10	16	2	5	
08-37.4683-102.1300-2-12-						0-C31581	-5	-5	-5	-10	25	-15	-5	15	26	1	2	
08-37.4436-102.2067-2-15-						0-C31583	-5	-5	-5	-10	52	-15	-5	13	-15	2	3	
08-37.4572-102.1722-2-15-						0-C31584	-5	-5	-5	35	29	16	11	-10	-15	2	24	
08-37.4719-102.1754-2-15-						0-C31585	-5	-5	-5	11	-20	-15	16	-10	-15	2	21	
20-37.4906-102.0422-2-15-						0-C31588	-5	-5	-5	16	-20	-15	11	-10	-15	2	19	
20-37.2569-102.0278-2-15-						0-C31598	-5	-5	-5	24	-20	15	-5	-10	-15	2	22	
20-37.4108-102.0397-2-15-						0-C31604	-5	-5	-5	16	-20	-15	12	-10	-15	2	21	
08-37.2564-102.1317-2-15-						0-C31611	-5	-5	-5	31	-20	-15	15	-10	-15	2	29	
08-37.2600-102.1864-2-15-						0-C31612	-5	-5	-5	-10	48	-15	-5	-10	-15	1	25	
08-37.2550-102.1867-2-15-						0-C31613	-5	-5	-5	24	-20	-15	11	-10	-15	2	22	
08-37.3750-102.1458-2-15-						0-C31618	-5	-5	-5	16	24	-15	5	-10	-15	2	15	
08-37.3597-102.1978-2-15-						0-C31619	-5	-5	-5	11	-20	-15	13	-10	-15	1	23	
08-37.3692-102.3744-2-15-						0-C31623	-5	-5	-5	20	29	-15	11	-10	-15	2	25	
08-37.3086-102.3442-2-15-						0-C31625	-5	-5	-5	17	23	-15	17	-10	-15	1	22	
08-37.3397-102.2772-2-15-						0-C31627	-5	-5	-5	20	24	19	8	-10	-15	1	25	
08-37.3017-102.3908-2-15-						0-C31639	-5	-5	-5	15	-20	-15	-5	-10	-15	2	29	
08-37.1642-102.4561-2-15-						0-C31643	-5	-5	-5	37	39	-15	22	-10	-15	2	25	
08-37.1835-102.3142-2-15-						0-C31652	-5	-5	-5	16	-20	-15	13	-10	-15	2	21	
08-37.2142-102.2554-2-15-						0-C31653	-5	-5	-5	-10	-20	-15	22	-10	-15	2	30	
08-37.2411-102.2609-2-15-						0-C31654	-5	-5	-5	10	-20	-15	11	-10	-15	2	23	
08-37.2239-102.3131-2-15-						0-C31655	-5	-5	-5	11	27	19	12	-10	-15	-1	19	

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS																
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAB SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)															
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu
08-37.0328-102.9078-2-15-			0-C31509			33510	-0.05		277	3455	54	-43	6.3	35	1.5	4	0.8	8956	15.6	5734	24	0.5
08-37.0386-102.8958-2-15-			0-C31510			45260	-0.07		532	22110	75	-78	7.8	49	-1.5	4	1.1	25630	18.9	14500	40	0.7
08-37.0300-102.9811-2-15-			0-C31513			25520	-0.04		274	5793	37	-32	5.1	29	1.2	3	0.8	6250	19.1	7147	17	0.4
03-37.0275-102.9875-2-12-			0-C31514			35380	-0.04		625	29810	39	-50	5.3	37	1.8	3	0.8	12570	8.7	10960	20	0.3
08-37.0011-102.9761-2-12-			0-C31515			34130	-0.07		585	17400	52	-65	8.1	59	1.9	3	1.0	17980	14.9	10660	37	0.5
08-37.0750-102.9383-2-15-			0-C31519			28500	-0.09		-212	12570	115	-114	14.6	154	2.3	6	1.2	136700	57.2	11340	63	2.1
08-37.0175-102.8783-2-15-			0-C31521			24050	-0.06		330	4855	103	-60	10.7	120	-1.2	7	1.5	82210	45.9	7873	57	1.1
08-37.6631-102.9617-2-15-			0-C31525			81590	-0.10		410	56140	75	-43	10.1	63	5.1	5	0.9	18960	6.2	17310	50	0.4
08-37.6483-102.9119-2-15-			0-C31527			34450	-0.08		1048	163400	84	-77	7.9	39	2.1	5	0.9	21830	14.6	13480	57	0.5
08-37.1306-102.8831-2-15-			0-C31528			69590	-0.12		600	11450	86	-80	10.9	52	3.8	5	1.2	19800	8.9	19440	64	0.5
08-37.1864-102.9189-2-15-			0-C31530			75100	-0.15		560	14990	71	143	9.7	56	4.0	5	1.1	20520	7.1	20680		0.6
08-37.2089-102.9119-2-15-			0-C31532			61780	-0.10		720	10740	78	-76	10.5	50	3.0	5	1.2	24570	14.3	21290	44	0.6
08-37.2244-102.9414-2-15-			0-C31535			58640	-0.07		697	16760	64	-78	7.6	44	2.4	6	1.0	20450	14.8	19350	36	0.5
08-37.6522-102.9972-2-15-			0-C31539			54190	-0.08		816	30830	115	-88	9.5	42	2.1	6	1.2	23360	18.3	19190	41	0.7
08-37.7019-102.9372-2-15-			0-C31541			53930	-0.12		415	128900	51	-74	6.0	35	2.6	3	0.8	13420	4.5	13260		0.3
08-37.7275-102.8750-2-15-			0-C31542			50360	-0.09		414	121900	54	-69	9.7	40	2.7	4	0.9	13810	7.1	14460	34	0.4
08-37.6772-102.9392-2-15-			0-C31546			42180	-0.08		383	201200	42	-63	5.8	27	2.1	4	0.6	12390	4.8	10830	42	0.3
08-37.3997-102.4731-2-11-			0-C31547			34150	-0.05		554	138100	44	-71	6.1	29	1.5	3	0.8	8314	7.3	11250	29	0.3
08-37.3969-102.4525-2-11-			0-C31549			51050	-0.11		726	63490	66	-75	6.1	37	2.3	5	0.8	14490	13.6	16710	40	0.5
08-37.4100-102.4872-2-11-			0-C31550			60650	-0.08		676	38680	65	-88	8.5	40	2.9	4	1.2	16590	6.6	18510	38	0.3
08-37.4603-102.4736-2-15-			0-C31551			60730	-0.06		647	21820	80	-72	10.4	41	3.5	5	1.2	16760	10.6	19290	44	0.5
08-37.4764-102.4911-2-15-			0-C31553			62280	-0.05		753	36840	69	-70	7.2	35	3.0	6	0.9	15890	9.5	21360	42	0.5
08-37.4900-102.4497-2-11-			0-C31555			68500	-0.10		576	59470	58	208	9.2	47	4.2	4	1.1	18630	6.4	17800	41	0.4
08-37.4878-102.4517-2-15-			0-C31556			51060	-0.05		590	35590	66	193	8.0	42	3.2	5	0.9	12780	10.8	15170	38	0.5
08-37.4828-102.4014-2-15-			0-C31557			61530	-0.06		782	26030	75	-70	7.8	46	3.0	5	1.0	15510	10.1	20870	45	0.4
08-37.3992-102.4017-2-15-			0-C31561			56340	-0.06		777	21310	86	-75	8.7	40	2.6	5	1.1	14360	13.6	20040	40	0.5
08-37.4486-102.2561-2-11-			0-C31570			63690	-0.08		587	17140	91	-86	9.4	45	3.1	5	1.2	18840	10.1	20920	43	0.5
08-37.4767-102.2736-2-15-			0-C31571			49570	-0.05		530	21330	79	165	9.4	42	2.2	5	1.0	12070	14.7	15470	48	0.6
08-37.4950-102.2669-2-15-			0-C31572			51050	-0.05		685	40510	50	-68	6.1	22	2.0	5	0.8	11430	8.3	18710	32	0.5
08-37.4875-102.2950-2-11-			0-C31573			27960	-0.09		661	24000	247	-98	10.8	121	-1.6	12	2.7	60520	59.7	10070	123	1.8
08-37.4683-102.1300-2-12-			0-C31581			22970	-0.12		-976	58060	358	-480	21.5	155	-2.5	12	1.6	113000	61.0	-23930	165	1.6
08-37.4436-102.2067-2-15-			0-C31583			23080	-0.09		247	15330	407	-112	16.7	177	-1.7	15	2.9	139700	60.6	-4999	239	1.9
08-37.4572-102.1722-2-15-			0-C31584			73180	-0.07		705	45560	76	-69	10.4	46	4.3	5	1.2	19860	4.6	17820	42	0.4
08-37.4719-102.1764-2-15-			0-C31585			57050	-0.06		890	33340	84	-79	7.9	46	3.3	5	1.1	13500	9.2	17210	45	0.5
20-37.4906-102.0422-2-15-			0-C31588			60320	-0.08		700	21690	58	-85	7.6	31	4.4	4	1.0	15000	7.0	17930	33	0.4
20-37.2569-102.0278-2-15-			0-C31593			61670	-0.06		754	66180	58	-72	7.9	37	3.5	5	1.0	15240	6.2	16960	41	0.4
20-37.4108-102.0397-2-15-			0-C31604			62290	-0.07		761	24620	74	-83	8.8	50	3.1	5	1.1	15070	8.8	17040	45	0.5
08-37.2564-102.1317-2-15-			0-C31611			59920	-0.08		693	29500	74	-81	8.4	39	3.3	4	1.0	17450	9.0	19920	32	0.5
08-37.2600-102.1864-2-15-			0-C31612			56500	-0.06		761	35740	63	-71	9.8	42	3.2	4	1.0	14710	8.6	20020	34	0.4
08-37.2550-102.1867-2-15-			0-C31613			61160	-0.06		738	38370	67	-69	8.2	36	2.8	5	1.0	14610	8.8	20790	33	0.4
08-37.3750-102.1458-2-15-			0-C31618			53980	-0.07		759	26260	132	-85	9.4	61	2.2	7	1.4	31730	26.6	16620	63	1.0
08-37.3597-102.1978-2-15-			0-C31619			63470	-0.08		605	12320	74	-83	7.9	48	2.9	4	0.9	15710	10.4	24020	39	0.5
08-37.3692-102.3744-2-15-			0-C31623			53610	-0.05		713	28860	68	-66	8.3	43	2.2	5	0.9	14240	11.8	19540	41	0.5
08-37.3086-102.3442-2-15-			0-C31625			58150	-0.06		824	27900	87	-72	7.3	48	3.0	7	1.1	20600	17.1	19400	51	0.7
08-37.3397-102.2772-2-15-			0-C31627			69400	-0.07		753	32170	115	-81	11.2	59	4.1	7	1.3	26750	12.5	18060	63	0.6
08-37.3017-102.3808-2-15-			0-C31638			63500	-0.08		658	26550	85	-86	9.0	50	3.3	5	1.0	19030	14.0	18870	41	0.6
08-37.1542-102.4561-2-15-			0-C31643			71660	-0.06		736	17910	68	-66	9.3	47	3.8	5	1.1	20210	8.3	18980	42	0.4
08-37.1836-102.3142-2-15-			0-C31652			51460	-0.07		610	31290	66	-75	7.8	41	2.6	4	1.1	14850	9.3	17630	28	0.5
08-37.2142-102.2564-2-15-			0-C31653			61030	-0.05		761	22080	69	-69	10.7	43	3.2	5	1.1	17290	9.2	19710	46	0.5
08-37.2411-102.2608-2-15-			0-C31654			55290	-0.05		689	17370	64	-66	6.9	30	2.6	5	0.9	15020	12.3	17080	32	0.4
08-37.2239-102.3131-2-15-			0-C31655			30500	-0.05		615	9392	76	-69	6.2	82	-1.1	6	1.0	23950	35.1	17160	35	1.3

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

④

DOE SAMPLE NUMBER							ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS (continued)																U/Th RATIO
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	IAS SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)																
							Mg	Mn	Na	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	Ti	V	Yb	Zn		
08-37.0328-102.9078-2-15-						0-C31509	3630	320	2458	-15	-1	4.6	5.2	-214	-1		8.7	3088	46	4.8	58	0.563	
08-37.0386-102.8959-2-15-						0-C31510	9678	571	8130	-26	-2	6.5	4.6	-318	-1		10.7	5003	97	4.3	50	0.383	
08-37.0300-102.9811-2-15-						0-C31513	4173	137	2397	25	-1	3.4	2.5	-133		1	6.0	2431	27	2.8	27	0.433	
08-37.0275-102.9875-2-12-						0-C31514	11300	392	4201	27	-1	4.4	3.0	-209	-1	-1	5.6	2993	55	2.2	-29	0.750	
08-37.0011-102.9761-2-12-						0-C31515	9234	373	4843	-21	-2	5.2	3.7	-290	-1		8.0	4152	63	4.8	100	0.488	
08-37.0750-102.9383-2-15-						0-C31519	-5384	1774	6398	-39	-3	11.1	7.6	-495	3	-1	22.4	11370	344	14.3		0.509	
08-37.0175-102.9783-2-15-						0-C31521	-2979	893	5379	-22	-2	7.2	8.3	-284	2	-1	20.3	8881	252	8.5	61	0.379	
08-37.6631-102.9617-2-15-						0-C31525	24760	202	2066	56	-3	10.1	5.3	459	2	1	16.7	3420	105	3.2	-63	0.401	
08-37.6483-102.9119-2-15-						0-C31527	6908	990	5655	-18	-2	5.5	5.4	551	-1	-1	11.5	5918	109	4.4	85	0.374	
08-37.1306-102.8831-2-15-						0-C31528	13200	642	7411	59	-4	9.4	6.7	-335	-1	-1	12.9	3776	91	4.3	-18	0.248	
08-37.1364-102.9189-2-15-						0-C31530	12010	609	6722	-33	-5	10.2	3.6	-363	-1	-1	12.2	3619	96	3.2	-67	0.352	
08-37.2089-102.9119-2-15-						0-C31532	9380	582	9347	48	-3	8.3	6.5	-311	1	-1	13.6	5433	95	5.4	78	0.272	
08-37.2244-102.9414-2-15-						0-C31535	10420	672	9841	33	-2	6.9	3.5	-298	-1	-1	11.0	5466	101	3.8	75	0.355	
08-37.6522-102.8972-2-15-						0-C31539	9228	910	9586	52	-2	7.1	5.2	-364	-1		17.6	5870	102	4.8	125	0.239	
08-37.7019-102.9372-2-15-						0-C31541	11590	270	5333	-24	-4	6.4	4.4	654	-1	-1	10.2	2297	93	-2.7	95	0.480	
08-37.7275-102.8750-2-15-						0-C31542	12100	338	6386	32	-3	6.8	4.3	444	-1	1	10.1	2830	88	2.8	67	0.376	
08-37.6772-102.9392-2-15-						0-C31546	11600	382	3708	21	-3	5.6	2.8	980	-1		7.4	2470	90	-1.6	93	0.676	
08-37.3997-102.4731-2-11-						0-C31547	7375	595	4858	27	-1	4.3	3.1	449	-1		6.7	2144	48	2.2	66	0.597	
08-37.3969-102.4525-2-11-						0-C31549	13830	361	8161	-27	-3	6.1	4.4	389	-1	-1	9.5	4254	72	6.7	107	0.526	
08-37.4100-102.4872-2-11-						0-C31550	19300	525	7777	-28	-3	7.8	5.3	-347	-1		11.4	3879	90	3.8	72	0.360	
08-37.4603-102.4736-2-15-						0-C31551	12910	544	8357	54	-2	8.1	6.6	-284	1	-1	13.5	3993	75	3.8	78	0.237	
08-37.4764-102.4911-2-15-						0-C31553	17260	494	8883	44	-2	7.2	5.1	325	-1	-1	11.7	3710	81	3.4	53	0.291	
08-37.4900-102.4497-2-11-						0-C31555	19220	362	5255	-31	-3	8.9	4.2	-335	-1	-1	11.8	3904	87	-2.4	-55	0.712	
08-37.4878-102.4517-2-15-						0-C31556	14290	300	6868	40	-2	6.1	5.1	635	-1		10.6	3260	69	4.0	75	0.425	
08-37.4828-102.4014-2-15-						0-C31557	13370	468	9178	45	-2	7.2	4.6	-261	-1		12.3	3768	77	3.5	120	0.293	
08-37.3992-102.4017-2-15-						0-C31561	10760	418	9284	58	-2	6.2	5.9	-277	-1	-1	12.0	4100	68	4.5	127	0.283	
08-37.4486-102.2561-2-11-						0-C31570	13660	618	8286	-27	-3	8.6	5.9	-356	-1	-1	14.1	4399	84	4.3	107	0.284	
08-37.4767-102.2736-2-15-						0-C31571	8915	392	5355	41	-2	6.8	5.6	-232	-1	1	11.2	4182	64	4.3	49	0.321	
08-37.4950-102.2669-2-15-						0-C31572	10100	402	9346	41	-2	5.4	4.1	-241	-1		8.7	3272	61	3.9	-34	0.322	
08-37.4875-102.2950-2-11-						0-C31573	-4636	1566	4647	-25	-2	9.8	22.3	-479	2	2	43.7	14970	200	14.5	113	0.229	
08-37.4683-102.1300-2-12-						0-C31581	-23250	11920	3149	-46	-4	13.7	24.8		4	2	64.4	17820	296	9.9		0.151	
08-37.4436-102.2067-2-15-						0-C31583	-5377	2220	2505	-30	-2	16.9	40.7	-506	7	3	97.6	26660	368	15.2	122	0.131	
08-37.4572-102.1722-2-15-						0-C31584	18520	560	4915	35	2	9.3	5.7	-311	-1	-1	11.3	4023	104	4.3	80	0.336	
08-37.4719-102.1764-2-15-						0-C31585	11980	454	8927	46	-2	6.5	5.8	-292	-1	-1	11.4	3734	60	3.0	136	0.281	
20-37.4906-102.0422-2-15-						0-C31588	10890	436	9521	49	-2	7.4	4.1	-320	-1	-1	10.3	4117	63	3.4	-81	0.282	
20-37.2569-102.0278-2-15-						0-C31598	16950	397	7562	-19	-2	7.5	4.5	-257	-1	-1	10.0	3829	76	2.5	95	0.330	
20-37.4108-102.0397-2-15-						0-C31604	14890	395	10040	47	-2	7.1	5.8	-296	-1	-1	11.5	3484	65	4.1	118	0.270	
08-37.2564-102.1317-2-15-						0-C31611	11660	500	8105	68	2	7.8	4.9	-327	-1		10.7	3802	67	3.3		0.374	
08-37.2600-102.1864-2-15-						0-C31612	12060	393	8547	57	-2	6.9	4.7	-260	1	-1	11.3	4000	64	3.0	44	0.265	
08-37.2550-102.1867-2-15-						0-C31613	13450	474	7994	33	-2	7.0	4.7	-264	-1		10.8	3460	69	3.2	88	0.278	
08-37.3750-102.1458-2-15-						0-C31618	9829	914	8199	36	-2	8.5	11.2	-360	2	-1	21.3	7451	127	7.5	96	0.235	
08-37.3597-102.1978-2-15-						0-C31619	10380	388	9277	-27	-3	7.5	3.6	-315	-1	-1	12.6	3031	82	4.5	78	0.270	
08-37.3692-102.3744-2-15-						0-C31623	10110	383	8378	42	-2	6.4	5.4	206	1		12.5	3711	69	4.2	58	0.256	
08-37.3086-102.3442-2-15-						0-C31625	11830	718	7931	44	-2	7.4	6.0	-295	-1	-1	13.5	5687	95	4.8	81	0.319	
08-37.3397-102.2772-2-15-						0-C31627	14510	729	6727	59	-2	9.8	9.2	-359	1	-1	18.5	5450	114	4.3	111	0.200	
08-37.3017-102.3808-2-15-						0-C31638	13210	503	8454	-29	-3	8.1	6.0	-340	-6		14.6	3678	80	5.0	-230	0.247	
08-37.1642-102.4561-2-15-						0-C31643	15120	602	6344	45	-2	8.7	5.1	-284	-1	-1	11.5	3856	90	4.8	95	0.270	
08-37.1836-102.3142-2-15-						0-C31652	9585	397	7917	51	-2	6.3	4.3	-285	-1		10.7	2487	64	4.5		0.327	
08-37.2142-102.2564-2-15-						0-C31653	11670	451	7670	53	-2	7.8	5.2	-275	-1	-1	12.4	3479	64	3.7	86	0.234	
08-37.2411-102.2608-2-15-						0-C31654	9535	499	7794	44	-2	6.3	4.6	-255	-1	-1	10.9	4012	66	3.5	64	0.294	
08-37.2239-102.3131-2-15-						0-C31655	-3304	1086	3393	34	-2	6.8	5.2	-346	2		10.2	6861	81	9.6	50	0.520	

DOE SAMPLE NUMBER						LASL SAMPLE LOCATION NUMBER AND FIELD DATA																				U CONCENTRATION									
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SCINTILLOMETER (cpi/gpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	SEDIMENT SAMPLES ANALYZED BY DELAYED NEUTRON COUNTING (DNC)	UNITS IN ppm
							DATE	HOUR																											
08-37.1386-102.1867-2-15-						0-C31664-10/02/77-12-			-	-	-C-	-	-	-	-	4-1-6-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40		
08-37.1258-102.1475-2-15-						0-C31665-10/02/77-12-			-	-	-C-	-	-	-	-	6-1-2-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30		
08-37.2136-102.1328-2-15-						0-C31668-10/02/77-14-			-	-	-	-	-	-	-	9-1-3-4-3-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00		
08-37.2419-102.2053-2-15-						0-C31672-10/02/77-15-			-	-	-	-	-	-	-	9-1-6-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00		
08-37.2267-102.2242-2-15-						0-C31673-10/02/77-15-			-	-	-C-	-	-	-	-	9-1-6-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.10		
08-37.1886-102.1869-2-15-						0-C31677-10/02/77-16-			-	-	-C-	-	-	-	-	6-1-6-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80		
20-37.2253-102.0239-2-15-						0-C31685-10/03/77-11-			-	-	-	-	-	-	-	11-1-6-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.60		
08-37.2333-102.0781-2-15-						0-C31687-10/03/77-11-			-	-	-	-	-	-	-	9-1-6-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20		
20-37.0322-102.0186-2-15-						0-C31691-10/03/77-15-			-	-	-C-	-	-	-	-	13-1-6-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.60		
08-37.0764-102.0444-2-15-						0-C31693-10/03/77-15-			-	-	-C-	-	-	-	-	9-1-6-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30		
08-37.0844-102.0964-2-15-						0-C31696-10/03/77-18-			-	-	-	-	-	-	-	11-1-2-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.90		
08-37.0831-102.3761-2-15-						0-C31700-10/04/77-10-			-	-	-	-	-	-	-	6-1-2-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.00		
08-37.0525-102.3800-2-15-						0-C31701-10/04/77-10-			-	-	-	-	-	-	-	11-1-6-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70		
08-37.0575-102.4283-2-15-						0-C31704-10/04/77-12-			-	-	-C-	-	-	-	-	2-1-6-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00		
08-37.0081-102.4050-2-15-						0-C31709-10/04/77-16-			-	-	-	-	-	-	-	6-1-6-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.30		
08-37.0192-102.3806-2-15-						0-C31710-10/04/77-16-			-	-	-C-	-	-	-	-	13-1-6-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20		
08-37.1106-102.3231-2-15-						0-C31718-10/05/77-12-			-	-	-	-	-	-	-	9-1-6-5-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.70		
08-37.0542-102.3147-2-15-						0-C31720-10/05/77-13-			-	-	-	-	-	-	-	-1-6-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20		
08-37.0522-102.3164-2-15-						0-C31721-10/05/77-13-			-	-	-	-	-	-	-	6-1-2-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60		
08-37.0375-102.2725-2-15-						0-C31722-10/05/77-14-			-	-	-	-	-	-	-	13-1-2-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.70		
08-37.0825-102.2719-2-15-						0-C31725-10/05/77-15-			-	-	-	-	-	-	-	6-1-2-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.40		
08-37.0931-102.2864-2-15-						0-C31726-10/05/77-15-			-	-	-	-	-	-	-	6-1-2-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.50		
08-37.0639-102.2542-2-15-						0-C31728-10/05/77-15-			-	-	-C-	-	-	-	-	-1-6-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60		
08-37.0589-102.2342-2-15-						0-C31730-10/05/77-16-			-	-	-C-	-	-	-	-	6-1-2-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20		
08-37.0764-102.2128-2-15-						0-C31731-10/05/77-17-			-	-	-C-	-	-	-	-	4-1-2-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.10		
08-37.0811-102.1792-2-15-						0-C31733-10/05/77-17-			-	-	-C-	-	-	-	-	11-1-6-4-6-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20		
08-37.0775-102.1414-2-15-						0-C31737-10/05/77-10-			-	-	-C-	-	-	-	-	11-1-2-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80		
08-37.9928-102.4983-2-15-						0-C31742-09/01/77-12-	29-		-	-	-	-	-	-	-	16-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.70		
08-37.9506-102.4447-2-15-						0-C31744-09/01/77-13-	30-		-	-	-	-	-	-	-	11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.70		
08-37.9017-102.4661-2-15-						0-C31747-09/01/77-14-	29-		-	-	-	-	-	-	-	5-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40		
08-37.8878-102.3878-2-15-						0-C31755-09/02/77-12-			-	-	-	-	-	-	-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00		
08-37.9697-102.3706-2-15-						0-C31757-09/02/77-14-	28-		-	-	-	-	-	-	-	11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40		
08-37.8831-102.2936-2-15-						0-C31751-09/02/77-16-	29-		-	-	-	-	-	-	-	11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.10		
08-37.8986-102.2706-2-15-						0-C31763-09/02/77-16-	29-		-	-	-C-	-	-	-	-	16-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50		
08-37.9961-102.3006-2-15-						0-C31765-09/02/77-18-	29-		-	-	-	-	-	-	-	16-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60		
08-37.8978-102.2436-2-15-						0-C31776-09/03/77-14-	30-		-	-	-C-	-	-	-	-	8-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80		
08-37.8917-102.2078-2-15-						0-C31779-09/03/77-15-	32-		-	-	-	-	-	-	-	8-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.80		
08-37.9433-102.0458-2-15-						0-C31801-09/04/77-17-	32-		-	-	-C-	-	-	-	-	11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50		
20-37.8519-102.0175-2-15-						0-C31804-09/04/77-10-	29-		-	-	-	-	-	-	-	19-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.80		
08-37.7778-102.0731-2-15-						0-C31808-09/06/77-11-	30-		-	-	-	-	-	-	-	5-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40		
20-37.7611-102.0158-2-15-						0-C31810-09/06/77-11-	31-		-	-	-	-	-	-	-	13-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.30		
20-37.7019-102.0158-2-15-						0-C31818-09/06/77-16-	32-		-	-	-	-	-	-	-	8-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80		
08-37.6236-102.0539-2-15-						0-C31823-09/07/77-11-	28-		-	-	-	-	-	-	-	19-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.90		
20-37.5178-102.0364-2-11-						0-C31831-09/07/77-15-	31-24.0	-C-	-	7.0-	300-	-	-	-	-	0-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.00		

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

2

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE										ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY		
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)										Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li	
08-37.1386-102.1867-2-15-						0-C31664	-5	-5	-5	-10	22	-15	6	-10	-15		1	17
08-37.1258-102.1475-2-15-						0-C31665	-5	-5	-5	-10	-20	-15	-5	-10	-15		1	14
08-37.2136-102.1328-2-15-						0-C31668	-5	-5	-5	11	-20	-15	15	-10	-15		2	39
08-37.2419-102.2053-2-15-						0-C31672	-5	-5	-5	23	-20	-15	13	-10	-15		1	26
08-37.2267-102.2242-2-15-						0-C31673	-5	-5	-5	23	-20	-15	-5	-10	-15		1	22
08-37.1886-102.1869-2-15-						0-C31677	-5	-5	-5	-10	-20	-15	9	-10	-15		2	19
20-37.2253-102.0239-2-15-						0-C31685	-5	-5	-5	15	-20	-15	7	-10	-15		2	24
08-37.2333-102.0781-2-15-						0-C31687	-5	-5	-5	19	-20	-15	18	-10	-15		1	25
20-37.0822-102.0186-2-15-						0-C31691	-5	-5	-5	-10	-20	-15	-5	-10	-15		1	25
08-37.0764-102.0444-2-15-						0-C31693	-5	-5	-5	-10	-20	-15	11	-10	-15		2	22
08-37.0844-102.0964-2-15-						0-C31696	-5	-5	-5	-10	-20	-15	13	-10	-15		2	13
08-37.0831-102.3761-2-15-						0-C31700	-5	-5	-5	-10	-20	-15	5	-10	-15		2	9
08-37.0525-102.3800-2-15-						0-C31701	-5	-5	-5	17	-20	-15	8	-10	-15		1	12
08-37.0575-102.4283-2-15-						0-C31704	-5	-5	-5	23	-20	-15	16	-10	-15		2	32
08-37.0081-102.4050-2-15-						0-C31709	-5	-5	-5	22	-20	-15	14	-10	-15		1	17
08-37.0192-102.3806-2-15-						0-C31710	-5	-5	-5	-10	-20	-15	10	-10	-15		2	27
08-37.1106-102.3231-2-15-						0-C31718	-5	-5	-5	13	-20	-15	5	-10	-15		2	27
08-37.0542-102.3147-2-15-						0-C31720	-5	-5	-5	19	-20	-15	-5	-10	-15		2	18
08-37.0522-102.3164-2-15-						0-C31721	-5	-5	-5	-10	-20	-15	-5	-10	-15		2	20
08-37.0375-102.2725-2-15-						0-C31722	-5	-5	-5	-10	-20	-15	-5	-10	-15		2	12
08-37.0825-102.2719-2-15-						0-C31725	-5	-5	-5	-10	-20	-15	-5	-10	-15		2	20
08-37.0931-102.2864-2-15-						0-C31726	-5	-5	-5	-10	-20	-15	10	-10	-15		2	12
08-37.0639-102.2542-2-15-						0-C31728	-5	-5	-5	18	-20	-15	-5	-10	-15		2	22
08-37.0589-102.2342-2-15-						0-C31730	-5	-5	-5	-10	-20	-15	8	-10	-15		2	17
08-37.0764-102.2128-2-15-						0-C31731	-5	-5	-5	16	-20	-15	-5	-10	-15		2	26
08-37.0811-102.1792-2-15-						0-C31733	-5	-5	-5	-10	-20	-15	7	-10	-15		2	26
08-37.0775-102.1414-2-15-						0-C31737	-5	-5	-5	16	-20	-15	-5	-10	-15		2	38
08-37.9928-102.4983-2-15-						0-C31742	-5	-5	-5	33	-20	-15	9	-10	-15		2	26
08-37.9506-102.4447-2-15-						0-C31744	-5	-5	-5	20	-20	-15	12	-10	16		2	39
08-37.9017-102.4661-2-15-						0-C31747	-5	-5	-5	20	-20	-15	11	-10	-15		2	29
08-37.8878-102.3878-2-15-						0-C31755	-5	-5	-5	12	-20	-15	-5	-10	-15		2	28
08-37.9697-102.3706-2-15-						0-C31757	-5	-5	-5	18	38	-15	-5	-10	-15		2	27
08-37.8831-102.2936-2-15-						0-C31761	-5	-5	-5	22	-20	-15	5	-10	-15		1	34
08-37.8986-102.2706-2-15-						0-C31763	-5	5	-5	30	-20	22	16	-10	17		2	25
08-37.9961-102.3006-2-15-						0-C31765	-5	6	-5	-10	-20	-15	8	-10	-15		2	25
08-37.8978-102.2436-2-15-						0-C31776	-5	-5	-5	-10	-20	-15	12	-10	-15		2	17
08-37.8917-102.2078-2-15-						0-C31779	-5	-5	-5	-10	44	-15	-5	38	-15		2	9
08-37.9433-102.0458-2-15-						0-C31801	-5	-5	-5	19	-20	-15	13	-10	-15		2	29
20-37.8519-102.0175-2-15-						0-C31804	-5	-5	-5	11	-20	-15	-5	-10	16		2	15
08-37.7778-102.0731-2-15-						0-C31808	-5	-5	-5	11	-20	-15	-5	-10	-15		2	21
20-37.7611-102.0158-2-15-						0-C31810	-5	-5	-5	13	20	-15	10	-10	-15		2	8
20-37.7019-102.0158-2-15-						0-C31819	-5	-5	-5	25	-20	19	-5	-10	-15		2	21
08-37.6236-102.0539-2-15-						0-C31823	-5	-5	-5	19	-20	19	15	-10	-15		1	32
20-37.5178-102.0364-2-11-						0-C31831	-5	-5	-5	15	-20	-15	12	-10	-15		1	17

APPENDIX I-B. (continued). Elemental Concentrations for Sediment Samples

③

DOE SAMPLE NUMBER						ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS																																					
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	DOE SAMPLE LOCATION NUMBER	Concentrations reported in weight parts per million (ppm)																																				
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu																					
08-37.1386-102.1867-2-15-	08-37.1258-102.1475-2-15-	08-37.2136-102.1328-2-15-	08-37.2419-102.2053-2-15-	08-37.2267-102.2242-2-15-	08-37.1886-102.1869-2-15-	20-37.2253-102.0239-2-15-	08-37.2333-102.0781-2-15-	20-37.0822-102.0186-2-15-	08-37.0764-102.0444-2-15-	08-37.0844-102.0964-2-15-	08-37.0931-102.3761-2-15-	08-37.0525-102.3800-2-15-	08-37.0575-102.4283-2-15-	08-37.0081-102.4050-2-15-	08-37.0192-102.3806-2-15-	08-37.1106-102.3231-2-15-	08-37.0542-102.3147-2-15-	08-37.0522-102.3164-2-15-	08-37.0375-102.2725-2-15-	08-37.0325-102.2719-2-15-	08-37.0931-102.2864-2-15-	08-37.0639-102.2542-2-15-	08-37.0589-102.2342-2-15-	08-37.0764-102.2128-2-15-	08-37.0811-102.1792-2-15-	08-37.0775-102.1414-2-15-	08-37.9928-102.4983-2-15-	08-37.9506-102.4447-2-15-	08-37.9017-102.4661-2-15-	08-37.8878-102.3878-2-15-	08-37.9697-102.3706-2-15-	08-37.8831-102.2936-2-15-	08-37.8986-102.2706-2-15-	08-37.9961-102.3006-2-15-	08-37.8978-102.2436-2-15-	08-37.8917-102.2078-2-15-	08-37.9433-102.0458-2-15-	20-37.8519-102.0175-2-15-	08-37.7778-102.0731-2-15-	20-37.7511-102.0158-2-15-	20-37.7019-102.0158-2-15-	08-37.6236-102.0539-2-15-	20-37.5178-102.0364-2-11-
0-C31664	0-C31665	0-C31668	0-C31672	0-C31673	0-C31677	0-C31685	0-C31687	0-C31691	0-C31693	0-C31696	0-C31700	0-C31701	0-C31704	0-C31709	0-C31710	0-C31718	0-C31720	0-C31721	0-C31722	0-C31725	0-C31726	0-C31728	0-C31730	0-C31731	0-C31733	0-C31737	0-C31742	0-C31744	0-C31747	0-C31755	0-C31757	0-C31761	0-C31763	0-C31765	0-C31776	0-C31779	0-C31801	0-C31804	0-C31808	0-C31810	0-C31818	0-C31823	0-C31831
49240	35390	57260	58870	55050	50450	52770	57170	49550	56490	40590	40940	44610	58920	49570	59900	51640	48280	48700	41990	40840	38110	46230	43170	49840	44810	47400	63090	54720	60330	52330	63950	60320	64170	61700	51660	51870	59540	39980	58230	35140	58890	68100	47760
-0.07	-0.04	-0.06	-0.06	-0.07	-0.05	-0.05	-0.06	-0.07	-0.05	-0.04	-0.06	-0.06	-0.05	-0.05	-0.06	-0.07	-0.05	-0.04	-0.05	-0.07	-0.05	-0.04	-0.05	-0.07	-0.04	-0.05	-0.12	-0.06	-0.06	-0.05	-0.05	-0.06	-0.08	-0.05	-0.05	-0.13	-0.08	-0.04	-0.09	-0.06	-0.07	-0.08	
637	842	654	694	735	702	696	617	663	655	820	658	588	746	629	648	762	685	756	611	787	664	715	882	724	878	833	637	651	748	732	789	619	544	782	749	483	592	662	724	297	783	753	573
14670	23940	35110	31450	22730	7967	19700	23130	33090	7918	23760	19000	7440	26790	11580	9173	39590	7752	14280	9258	15690	12780	13900	16190	27980	23650	45340	19650	52410	13170	46230	28240	48600	40530	25370	45780	20030	27510	19890	21750	7340	14070	21280	24050
79	50	67	73	65	79	52	30	50	73	80	123	63	69	77	80	53	69	50	107	96	100	54	93	77	66	64	83	70	77	71	83	78	84	67	336	77	119	73	220	82	71	106	
-72	-59	-66	-76	-79	-65	-63	-77	-80	-69	-68	-82	-77	-66	-71	-79	-77	-71	-70	-93	-80	-76	-63	-79	-85	-65	-63	-89	-71	-73	-67	-73	-85	-74	-72	-98	-84	-69	-74	-103	-72	-78	-81	
7.8	6.3	7.3	8.6	8.1	9.2	6.6	8.7	5.9	9.1	5.5	9.3	5.5	9.3	6.5	7.8	6.7	7.3	4.8	6.1	6.9	7.8	5.0	6.1	7.2	7.3	6.3	6.9	11.2	7.3	8.5	8.4	7.8	8.7	8.8	5.8	13.9	8.0	8.4	7.3	10.4	9.6	9.1	8.6
40	33	45	51	50	40	32	49	38	45	41	105	36	46	53	50	32	43	35	74	59	82	36	38	47	32	36	42	48	35	37	37	40	35	40	43	37	54	39	115	47	36	55	
2.3	1.4	3.1	3.5	2.4	2.6	2.4	2.9	2.3	3.0	-1.0	2.8	2.3	2.7	2.0	2.5	2.3	1.7	1.3	-1.2	-1.4	1.5	-0.9	-1.1	-1.4	1.5	1.4	2.8	4.1	2.6	1.9	2.9	2.6	4.1	2.8	1.8	3.1	2.6	-1.1	2.4	-1.8	3.0	3.1	2.7
4	4	5	5	4	5	4	5	4	5	7	8	5	5	7	6	3	6	5	7	5	8	5	6	6	5	5	4	5	6	5	6	5	4	6	11	5	7	6	6	5	6		
0.9	1.0	1.0	1.0	1.2	1.1	0.8	1.0	1.0	1.1	1.0	1.7	1.0	0.9	1.5	1.0	1.0	1.0	0.8	1.1	1.0	1.7	0.9	1.0	1.1	0.9	1.1	1.1	1.4	1.1	1.1	1.2	1.1	1.0	1.2	1.7	1.3	1.3	1.3	1.6	1.0	1.0	1.2	
15810	16530	15520	15170	15870	15820	11920	16180	12330	14360	23250	56500	18280	16660	25420	15790	12640	17590	11890	32440	33420	37530	11580	18030	19980	14230	18030	16020	19980	14910	14020	15540	15110	17640	16280	13230	89980	17240	28260	15860	64860	18630	16020	26700
17.9	18.4	11.3	10.3	9.2	18.0	8.6	14.8	8.8	13.0	17.8	44.5	20.0	11.4	26.3	12.9	9.2	21.9	14.9	33.9	30.4	40.8	17.1	25.1	21.9	14.9	15.0	5.9	10.0	10.0	11.8	8.3	6.8	12.6	13.0	36.4	11.8	36.4	11.6	54.4	14.6	7.2	23.9	
17910	19800	18810	18930	17490	21690	18170	19390	18090	17770	17930	16660	18020	21450	20470	21630	17060	19250	19950	18400	16150	17260	18990	23080	17750	22130	17780	20180	16740	20890	15910	21450	19290	19790	21270	17650	15420	21510	16880	18480	12730	20250	21210	13350
38	29	37	40	47	37	29	43	41	36	41	68	28	39	44	43	30	42	26	53	47	53	28	35	46	37	33	40	51	43	49	42	42	55	50	41	187	47	44	23	110	52	35	60
0.5	0.6	0.5	0.4	0.4	0.6	0.3	0.5	0.5	0.5	0.6	1.5	0.7	0.6	0.8	0.7	0.4	0.7	0.6	1.3	0.9	1.5	0.5	1.0	0.8	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.9	0.6	1.0	0.4	1.6	0.6	0.5	0.9	

④

125

APPENDIX II

HISTOGRAM OF THORIUM CONCENTRATIONS IN SEDIMENTS
FROM THE LA JUNTA QUADRANGLE, COLORADO

APPENDIX II

HISTOGRAM OF THORIUM CONCENTRATIONS IN SEDIMENTS FROM THE LA JUNTA QUADRANGLE, COLORADO

APPENDIX III

SUMMARY OF STANDARD LASL HSSR PROCEDURES AND EXPLANATION OF CODES USED
AND KEY TO THE SAMPLE TYPES LISTED IN APPENDIX I

APPENDIX III-A

Summary of Standard LASL HSSR Field and Analytical Procedures

APPENDIX III-B

Explanation of Codes Used in Appendix I

APPENDIX III-C

Key to Sample Types Listed in Appendix I

APPENDIX III-A

SUMMARY OF STANDARD LASL HSSR FIELD AND ANALYTICAL PROCEDURES

I. FIELD PROCEDURES

Water Sampling

Water samples are collected first, directly from the source wherever possible, filtered through a 0.45- μ membrane filter (except in Alaska where this step is omitted) directly into one each, prewashed and sealed, 41-ml reactor "rabbit" and 25-ml vial (both polyethylene). Water samples in both the rabbit and vial are then acidified to a pH ≤ 1 with 8N reagent-grade HNO_3 . All sample containers are doubly labeled with preprinted, adhesive labels carrying the same sample location number as that preprinted on the field data form. Springs are sampled as near to their point of emergence as possible; stream waters are taken from the fast-flowing current away from the bank; ponds (including small lakes and reservoirs) are sampled from just below the surface, near their center; and well waters are taken near the wellhead if the well is pumping or from a holding tank if not.

Sediment Sampling (Wet or Dry)

Following the collection of the water sample (if any), enough fine-grained, organic-rich, water-transported sediment to yield a composite sample of 25 g after processing (as indicated below) is taken from beneath the water level (where water exists) at three adjacent spots at each spring or stream location. The sediment is put into a new, clean, and originally sealed, rip-top polyethylene bag which is then properly double-labeled for delivery (with the field data form) to the contractor's drying facility. After drying at $\leq 100^\circ\text{C}$, each sample is sieved through a 100-mesh stainless steel sieve. The minus 100-mesh fraction is put into a prewashed, 25-ml polyethylene vial which is then appropriately double-labeled (using labels from the data form) and sealed for shipment to the LASL. In the case of lakes sampled in Alaska, the sediment is taken from as near the center of each lake as possible by dropping a tethered, stainless steel bottom sampler overboard from a pontoon-equipped helicopter. Here, only a bottom sample from a single location is taken (i.e., it is not a composite) and sampling is limited to lakes less than 10 m deep and about 0.3 to 2.0 km in least horizontal dimension. The sampling device is rinsed before each use and the raw sample is put into a clean polyethylene bag, labeled, and treated as above.

Field Measurements

The air temperature, read in the shade at the time of sampling, is recorded to the nearest whole degree Celsius. The water temperature is measured in the source water and recorded to the nearest one-tenth degree Celsius. The pH of the source water is measured with a calibrated, portable pH meter and recorded to the nearest one-tenth of a pH unit. The conductivity (in $\mu\text{mho/cm}$) of the source water is measured with a calibrated, temperature-compensated (25°C), portable meter. The scintillometer readings are measured with a portable scintillometer on a flat, dry spot within a few meters of the sample location at spring or stream sites. Two readings are recorded, the first with a radiation shield in place (blocking out ground radiation) and the second with the shield removed. The readings (in counts/s) are converted by computer,

using measured calibration factors, to the equivalent uranium (eU) value in the data listings. Special measurements such as dissolved oxygen are made with a calibrated, commercially available, portable meter and probe. In lakes, the water temperature, pH, conductivity, and (special) dissolved oxygen are usually all measured with a single, digital-readout unit, utilizing a parameter selector switch and a composite probe that is lowered from the sampling helicopter to just below the water's surface. Care is taken to see that these measurements are made before the bottom sediment is disturbed.

Field Observations

These represent the best judgment of the field sampler at a location and include general descriptions of the local bedrock, sediment, water, vegetation, terrain, weather, possible contaminants, and well configuration, if applicable. Because these observations are subjective and made quickly in the field, they should be held subordinate to formally documented information such as that provided by published topographic or geologic maps, etc.

Sample Location Verification

Each contractor is supplied field maps with the desired sample types and general locations symbolically premarked at the LASL. In the lower states, the field maps are generally 1:24 000-scale or 1:62 500-scale USGS topographic maps; in Alaska, they are normally 1:250 000-scale NTMS quadrangle maps, also available from the USGS. As each location is sampled, a unique sample location number, preprinted on transparent adhesive labels (also used for labeling the samples) that are provided with each identically numbered field data form, is placed on top of the precisely marked point representing the sample site on the field map. When a desired sample as specified cannot be obtained, an identical or alternate sample type (as near as possible to the original one) is picked, and the new sample type and/or location is/are marked on the field map and properly labeled as above. The latitude and longitude of each location is then computed by the sampling contractor within 48 h of taking each sample. Every location is later checked (and corrected if necessary) at the LASL by digitizing the sample locations on each map and comparing them to those computed in the field. The latitudes and/or longitudes are corrected if the field-computed locations are displaced by more than 300 m from the locations marked on the field maps. A final visual check of sample locations is made by overlaying computer-produced location plots on the field maps used. The computer program for generating the Universal Transverse Mercator map projection overlays is described by Cheadle (1977).

II. ANALYTICAL PROCEDURES

Uranium Determination in Water Samples by Fluorometry

Under normal procedures, the 25-ml water vial is vigorously shaken and duplicate 0.20-ml aliquots of water are transferred to platinum dishes. The aliquots are evaporated under heat lamps and a 0.4-g pellet of 2% LiF-98% NaF flux is added to each dish. The pellets are first preheated under lamps, then fused over special propane burners. After each pellet/sample cools, it is excited with ultraviolet radiation in the fluorometer and the fluorescence is read and recorded. The uranium concentrations are determined by using a computer routine which compares the fluorescence from each pellet with those from other pellets, run at the same time, containing uranium-standard solutions and

blanks. The uranium concentration of the sample, as given in the appropriate data listings, is then the average obtained from the duplicate aliquots. The lower limit of detection for each aliquot by the normal procedure is 0.2 ppb; however, in some areas many samples have uranium concentrations below this. Consequently, when a sample run by the normal procedure is determined to have <0.2 ppb uranium, it is routinely reanalyzed using new duplicate aliquots that have been put through an additional evaporative concentration step that provides a 10X concentration factor. This additional procedure, using the same basic fluorometric method, reduces the lower limit of detection of uranium in natural waters to 0.02 ppb. When a uranium concentration lower than 0.02 ppb is found in an aliquot, it is arbitrarily assigned a value of 0.01 ppb. If the uranium value given in the data listings is 0.01 ppb, both aliquots had uranium concentrations below the detection limit. Whether concentrated or not (which can be determined from the uranium level in the listing), the fluorometric analytical precision is $\sim 30\%$ at the lower detection limit, $\sim 20\%$ at one order of magnitude above this, and $\sim 10\%$ at two or more orders of magnitude above the lower detection limit. The basic fluorometric method used is described in detail by Hues et al (1977).

Uranium Determination in Water Samples by Delayed-Neutron Counting (DNC)

Only waters with >40 ppb uranium (as determined by fluorometry at the LASL, where this is the upper limit of detection without recalibration) or those with impurities that cause interference with uranium-induced fluorescence are analyzed using DNC. Samples are received in 41-ml or 25-ml vials (used exclusively in some of the early work) and are transferred to clean, labeled, 41-ml rabbits before being analyzed. Each water sample is weighed, and its weight (less that of the rabbit) and location number are recorded. The rabbits are then loaded into a 25-sample transfer clip. The reactor pneumatic transfer system and background radiation levels are checked and four standards are run for calibration. The transfer clip is installed on the pneumatic feed line and the samples are cycled through the system (typically, a 60-s irradiation, 30-s delay, and 60-s count cycle is used). The uranium concentration is automatically measured, converted to ppb, and entered into a computer data base. The lower detection limit for uranium in water by DNC as used at the LASL is 0.2 ppb. The statistical error of this method is $\sim 20\%$ at a uranium concentration of 1 ppb, $\sim 6\%$ at 10 ppb, and <4% at 40 ppb or greater. Statistical treatments of uranium concentrations obtained from the same suites of samples analyzed both by fluorometry and DNC have shown that there is no significant difference between the results of the two analytical methods as used at the LASL. This analytical comparability is rechecked periodically.

Elemental Determinations in Water Samples by Plasma-Source Emission Spectrography

The concentrations of Ca, Co, Cr, Cu, Fe, Mg, Mn, Mo, Ni, Pb, Ti, and Zn in water samples are determined at the LASL by inductively coupled plasma-source emission spectrography. To allow complete system equilibration, the inductively coupled plasma and photomultiplier tubes are powered for at least 1 h prior to making any analyses. Argon coolant and sample carrier gas lines are adjusted and calibrated using a zinc standard. The sample solution is taken up from its container, nebulized, and injected into the plasma source at a rate of $9.2 \times 10^{-9} \text{ m}^3/\text{s}$. After the computer determines that the photomultiplier tubes have stabilized, a 15-s exposure of the resultant spectrum is made on a direct-reading spectrograph. The resulting signals are read directly

into a computer and converted automatically to give the elemental concentrations. Corrections for interfering elements are made simultaneously by computer. When high (off-scale) results are obtained, the computer calls for the insertion of a filter between the plasma source and the spectrograph, repeats the readings, and then converts and stores the corrected elemental concentrations. The lower analytical detection limits generally achieved are (in ppb): Ca (20), Co (55), Cr (25), Cu (4), Fe (25), Mg (2), Mn (3), Mo (25), Ni (25), Pb (200), Ti (4), and Zn (50). When an analysis results in an elemental concentration that is below the detection limit, a minus sign preceding the value of the detection limit for that element is inserted in the data listings. Analytical precision for the elements as determined in water by this method is $\sim 50\%$ at the lower detection limit, improving to $\sim 10\%$ one order of magnitude above the lower detection limit and to $\sim 5\%$ two orders of magnitude above the detection limit.

Uranium Determination in Sediment Samples by DNC

All sediment samples are analyzed for total uranium by DNC. A split of each sample (dried and sieved as described) is transferred to a clean 4-ml rabbit, weighed (less the tare), and its weight recorded along with the appropriate location number. These rabbits are then loaded into a 50-sample transfer clip. The reactor pneumatic transfer system and background radiation levels are checked, and standards are run for calibration. The transfer clip is installed and the samples are cycled through the system (typically, a 20-s irradiation, 10-s delay, and 30-s count cycle is used). The uranium concentration is automatically measured, converted to ppm, and entered into the data base. The lower limit of detection of this method is 20 ppb (not ppm) uranium, below the range of uranium concentrations in natural sediment samples. Above the 1 ppm level, the uranium values in sediment measured by DNC at the LASL have a one-sigma error of less than 4%. The specially designed delayed-neutron detectors, built by the LASL and used for these analyses, are described by Balestrini et al (1976).

Elemental Determinations in Sediment Samples by Energy Dispersive X-Ray Fluorescence

A computer-controlled, energy-dispersive x-ray fluorescence system is used to determine Ag, Bi, Cd, Cu, Nb, Ni, Pb, Sn, and W in sediments. The system consists of an automatic 20-position sample changer, a lithium-drifted silicon detector, a pulsed molybdenum transmission-target x-ray tube, a multi-channel analyzer, and a minicomputer. The sediment samples are prepared for analysis by grinding 6 g of each minus 100-mesh sample to a minus 325-mesh powder. A computer program positions the 6-g samples in the x-ray beam, unfolds overlapping peaks, determines peak intensities for each element, and calculates the ratio of the intensity of each peak to that of the molybdenum $K\alpha$ Compton peak. Concentrations of each element are then calculated using equations obtained by analyzing prepared standards. Detection limits are: 5 ppm for Ag, Bi, Cd, and Pb; 10 ppm for Cu and Sn; 15 ppm for Ni and W; and 20 ppm for Nb. When an analysis results in an elemental concentration that is below the detection limit, a minus sign preceding the value of the detection limit for that element is inserted in the data listings. The relative standard deviation is 10% or less at the 100-ppm level and 20% or less at the 20-ppm level. Details of the method and equipment used are described by Hansel and Martell (1977).

Beryllium and Lithium Determinations in Sediment Samples by Arc-Source Emission Spectrography

A 7.5-mg portion of the minus 325-mesh sample that has already been analyzed by x-ray fluorescence is mixed with 7.5 mg of a buffer consisting of one part graphite and one part SiO_2 . The sample/buffer mixture is placed into a graphite electrode that is used as the anode of a dc arc having a short circuit current of 17A. A 60-s exposure of the resulting spectrum is made on a direct-reading spectrograph. Photomultiplier tubes are used to measure the second order 313.0-nm line of Be, the first order 670.7- and 610.3-nm lines of Li, the background spectra near these lines, and the 327.6-nm line of V. The 670.7-nm Li line is used for Li concentrations up to 30 ppm and the 610.3-nm line of Li is used for concentrations above 30 ppm. The V line is used to correct the Be value when V is above 1000 ppm. The signals from the photomultiplier tubes are read by a digital voltmeter and are processed by a desktop calculator. The results are simultaneously printed on paper and written on cassette tape for later transmission to a computer data file. The elemental concentrations of Be and Li are determined from the spectra, based on the results of previously run calibration standards. The lower detection limit for both elements is 1 ppm. When an analysis results in an elemental concentration that is below the detection limit, a minus sign preceding the value of the detection limit for that element is inserted in the data listings. Precision at the lower detection limit is $\sim 50\%$ for both and improves to $\sim 25\%$ at one order of magnitude above the lower limit.

Elemental Determinations in Sediment Samples by Neutron Activation Analysis (NAA)

Immediately upon completion of the uranium analysis of sediment samples by DNC, the same 4-ml sediment splits are entered into the NAA sequence. The concentrations of 31 additional elements are determined by this procedure. The full DNC/NAA timing sequence used at the LASL for each sediment sample is: 20-s irradiation, 10-s delay, 30-s DNC analysis, 20-min delay, 500-s γ -ray count for short-lived radionuclides, 96-s re-irradiation, 14-day delay, and finally a 1000-s γ -ray count for long-lived radionuclides. The γ -ray counting is done by lead-shielded Ge(Li) detectors; the 4096-channel γ -ray data are recorded and subsequently analyzed for each individual element by computer. The analytical data for each sample are automatically printed out along with the associated statistical errors. The lower detection limits for the various elements as reflected by the "less than" values (denoted by a minus sign in front of a concentration) in the data listings are the values for the individual elements at which the statistical counting error approaches 50%. Current "typical" lower detection limits for the elements determined by NAA are reported in Nunes and Weaver (1978); however, the actual detection limit for an element depends upon the composition of the sample, and this limit may be higher or lower than the typical value. At concentration values one order of magnitude above the lower detection limits, the relative errors are generally less than 10%.

APPENDIX III-B

EXPLANATION OF CODES USED IN APPENDIX I

DOE SAMPLE NUMBER

STATE: A two-digit Federal Information Processing Standards (FIPS) code that designates the state from which each sample came. For the states being sampled by the LASL, the code numbers are:

Alaska	= 02	Montana	= 30	South Dakota	= 46
Arizona	= 04	Nebraska	= 31	Texas	= 48
Colorado	= 08	New Mexico	= 35	Utah	= 49
Idaho	= 16	North Dakota	= 38	Wyoming	= 56
Kansas	= 20	Oklahoma	= 40		

LATITUDE AND LONGITUDE: Sample location, in degrees and decimal degrees to four places. Although generally much better, locational accuracy cannot be guaranteed closer than about 300 m (1000 ft).

DOE LAB: A Department of Energy (DOE) one-digit identifier designating the DOE laboratory responsible for taking the samples and data shown in the listings, as well as providing the analyses of the uranium and other elemental concentrations, if any. The LASL is designated by the numeral 2.

SAMPLE TYPE: A two-digit identifier which specifically designates the pertinent properties defining the sample type to which the listed data relate. For explanation of the code used, refer to the attached "Key to Sample Types," in section C of this appendix.

REPLICATE: A three-digit sequential number assigned to indicate a multiple sample of a single sample type from a single location. The largest number in use indicates the most recent sample taken and there will always be all smaller sequential numbers representing earlier samples back to 0, which is the initial sample from any given location. Except in the case of special studies, there will be no replicate samples and this entry will therefore be a single zero.

LASL SAMPLE LOCATION NUMBER AND FIELD DATA

LASL SAMPLE LOCATION NUMBER: A unique six-place alphanumeric designator permanently assigned by the LASL to every location sampled. For internal use, these numbers are assigned in blocks to the various areas individually treated and reported upon, and therefore serve to generally locate the samples within various areas for which the LASL is responsible as follows.

<u>Location Numbers</u>	<u>State</u>
N00 001 through N99 999	= Principally New Mexico
C00 001 through C99 999	= Principally Colorado
W00 001 through W99 999	= Principally Wyoming
M00 001 through M99 999	= Principally Montana
A00 001 and above	= Alaska only
L00 001 and above	= Areas beyond the western boundary of LASL's region as established by DOE in 1977.
Ø00 001 and above	= Areas beyond the eastern boundary of LASL's region as established by DOE in 1977.

TIME SAMPLED: The DATE that the sample was taken, in terms of the number of the MONTH, followed by the DAY and finally the YEAR, separated by slashes, and then the TIME it was taken on that date to the nearest whole HOUR on a 24-hour clock.

AIR TEMPERATURE: The temperature that was measured in the shade at the time of sampling, to the nearest whole degree Celsius ($^{\circ}\text{C}$).

WATER TEMPERATURE: The temperature that was measured in the sample water (in situ whenever possible) at the time of sampling, to the nearest one-tenth of a degree Celsius (0.1°C).

COMMENTS: A "C" in this column indicates that some secondary comment not included in the listing was recorded at the sample location. This information will be used by the LASL in evaluating the data, and if appropriate, it will be mentioned in the final report.

SPECIAL MEASUREMENTS: An "S" in this column indicates that one or more field measurements in addition to those listed were made at the sample location. A description of any special parameters measured and the measured value at each sample location will be included in the final HSSR survey report on the area.

pH: The pH, to the nearest one-tenth (0.1) of a pH unit, that was measured in the water at the sample location at the time of sampling.

CONDUCTIVITY: The conductivity, in $\mu\text{mho/cm}$, that was measured in the water at the sample location at the time of sampling.

SCINTILLOMETER: The equivalent uranium (eU), in ppm, as measured on a flat ground surface within 10 m of the sample location using a scintillometer fitted with a differential-gamma sampler (DGS). The effect of the DGS is to introduce a fixed geometry into the measurement and remove the background.

ROCK TYPE: The single digit in this column provides a general description of the dominant lithologic regime at or near the sample location, as given below.

1 = Sedimentary	3 = Igneous
2 = Metamorphic	4 = Unknown

ROCK COLOR: The single digit in this column provides an indication of the observed dominant color of local bedrock exposures at or near the sample location, as given below.

1 = White/Buf	4 = Pink/Red	7 = Gray
2 = Yellow	5 = Green	8 = Black
3 = Orange	6 = Brown	9 = Other

SEDIMENT TYPE: The single digit in this column provides a subjective evaluation of the dominant sediment type at the sample location, as given below.

1 = Boulders	4 = Sand	7 = Other
2 = Cobbles	5 = Mud	
3 = Gravel	6 = Muck	

SEDIMENT COLOR: The single digit in this column indicates the observed dominant color of the bottom sediment (stream channel, lake bed, etc.) at the sample location at the time of sampling, as given below.

1 = White/Buf	4 = Pink/Red	7 = Gray
2 = Yellow	5 = Green	8 = Black
3 = Orange	6 = Brown	9 = Other

WATER FLOW: The single digit in this column provides a subjective evaluation of the water movement at the sample location at the time of sampling, as given below.

1 = Stagnant	3 = Moderate	5 = Torrent
2 = Slow	4 = Fast	

WATER LEVEL: The single digit in this column provides a subjective estimate of water quantity at the time of sampling, relative to its usual condition at the sample location, as given below.

1 = Dry	3 = Normal	5 = Flood
2 = Low	4 = High	

WATER COLOR: The single digit in this column provides a subjective evaluation of suspended load in the sample water, as given below.

1 = Clear	3 = Cloudy	5 = Algal
2 = Murky	4 = Muddy	6 = Other

STREAM CHANNEL: The single digit here gives a subjective evaluation of stream channel character at the sample location at the time of sampling, as given below.

1 = Depositing	2 = Eroding	3 = Unknown
----------------	-------------	-------------

VEGETATION TYPE: The single digit in this column provides a subjective evaluation of the dominant plant type in the vicinity of the sample location, as given below.

1 = Conifers	4 = Grass	7 = Other
2 = Deciduous	5 = Moss	
3 = Brush	6 = Marsh	

VEGETATION DENSITY: The single digit in this column provides a subjective estimate of the amount of plant cover in the vicinity of the sample location, as given below.

1 = Barren	3 = Moderate	5 = Very Dense
2 = Sparse	4 = Dense	

RELIEF: The single digit in this column provides a subjective evaluation of the topography within a few hundred meters of the sample location, as given below.

1 = Flat	3 = Gentle (15-60 m)	5 = High (>300 m)
2 = Low (<15 m)	4 = Moderate (60-300 m)	6 = Other

WEATHER: The single digit in this column gives the observed climatic condition at the sample location at the time of sampling, as given below.

1 = Clear	3 = Overcast	5 = Snowy
2 = Partly cloudy	4 = Rainy	6 = Other

OWNERSHIP: Not used.

CONTAMINANTS: The single digit here indicates known or suspected local factors likely to influence analytical results, as given below.

1 = None	4 = Industry	7 = Urban
2 = Mining	5 = Sewage	8 = Recreation
3 = Agriculture	6 = Power generation	9 = Other

WELL TYPE: If a well water sample, the single digit in this column provides a general description of the type of well from which the sample was taken, as given below.

1 = Windmill-stock	4 = Suction pump	7 = Hand bail
2 = Windmill-domestic	5 = Jet pump	8 = Unknown
3 = Submersible pump	6 = Large turbine	9 = Other

WELL DIAMETER: When shown, the one or two digits in this column give the measured or estimated inside diameter, in inches, of the well casing from which the water sample came.

WELL DEPTH: When shown, the one, two, or three digits in this column give the total drilled depth from the surface, in feet, of the well from which the sample came. Three 9s in this column indicates a well depth greater than 1000 ft.

WATER DEPTH: When shown, the one, two, or three digits in this column give the known depth, in feet, from the surface to the standing water in the well. A value of -1 in this column indicates a flowing artesian well.

URANIUM CONCENTRATION: The value given in this column is the analytically derived value of the total uranium concentration found in the water sample (in ppb) or in the sediment sample (in ppm). Those uranium concentrations in water that are shown with an asterisk were measured using the delayed-neutron counting method, while those without an asterisk were determined fluorometrically. The uranium analyses in water samples as determined by both of these methods at the LASL are directly comparable, as noted in section A of this appendix.

REMAINING ENTRIES: The data presented in the remaining entries of the listings utilize no codes as such and are described in the respective column headings. However, there are four conventions used throughout the listings of elemental concentrations: a) all concentrations in waters are reported in ppb; b) all concentrations in sediments are reported in ppm; c) concentrations "less than" the lower detection limit are denoted by a minus sign before this limit for the specific sample (except for fluorometrically determined uranium in waters, the convention for which is described in section A of this appendix); and d) a blank space in the data listings for any elemental concentration signifies that no analytical result was obtained for that element.

APPENDIX III-C

KEY TO SAMPLE TYPES LISTED IN APPENDIX I

This numerical key provides the necessary tie between the specific type or form of each sample taken and each individual suite of field and laboratory data to which the sample relates. It defines the various sample types collected by the LASL in the DOE HSSR for uranium.

The two-digit key number assigned to each sample type designates three distinct properties of the samples taken. These properties are: (a) The general sample source (spring, stream, dry stream, etc.); (b) The sample medium (water or sediment); and (c) The treatment given the sample in the field or laboratory prior to its analysis by the LASL.

The key numbers are inserted in the sample type columns of the specially formatted DOE sample numbering system to positively identify the sample type for all LASL sample data submitted.

<u>KEY NO.</u>	<u>SOURCE / MEDIUM / TREATMENT</u>
06 -	<u>Spring water</u> sample <u>filtered</u> through a 0.45- μ membrane filter <u>and acidified</u> to a pH of <u><1</u> with reagent-grade nitric acid (HNO_3).
07 -	<u>Stream water</u> sample <u>filtered</u> through a 0.45- μ membrane filter <u>and acidified</u> to a pH of <u><1</u> with reagent-grade nitric acid (HNO_3).
08 -	<u>Well water</u> sample <u>filtered</u> through a 0.45- μ membrane filter <u>and acidified</u> to a pH of <u><1</u> with reagent-grade nitric acid (HNO_3).
11 -	<u>Wet spring sediment</u> sample <u>dried</u> at <u><100°C</u> and sieved <u>to -100 mesh</u> through stainless steel sieves.
12 -	<u>Wet stream sediment</u> sample <u>dried</u> at <u><100°C</u> <u>and sieved to -100 mesh</u> through stainless steel sieves.
15 -	<u>Dry stream sediment</u> sample <u>dried</u> at <u><100°C</u> (if necessary) <u>and sieved to -100 mesh</u> through stainless steel sieves.
99 -	Other sediment These key numbers are to be used only for sediment (99) samples coming from a special source and not described for any of the types of samples above. When used in the listings published herein, the source and treatment of the samples so designated are described in the text.

REFERENCES CITED

- Adler, H. H., 1974, Concepts of uranium ore formation in reducing environments in sandstones and other sediments, in Formation of Uranium Ore Deposits, Proc. International Atomic Energy Agency, Athens, Greece, 6-10 May 1974, STI/PUB/374, LSBN92-0--4-274-F, pp. 141-168.
- Baars, D. L., 1972, Devonian system, in Geologic Atlas of the Rocky Mountain Region, United States of America, Mallory, W. W. (Ed. in chief), Rocky Mountain Assoc. of Geol., Denver, CO, pp. 90-99.
- Balestrini, S. J., Balagna, J. P., and Menlove, H. O., 1976, Two specialized delayed-neutron detector designs for assays of fissionable elements in water and sediment samples, Nucl. Instrum. and Methods, v. 136, pp. 521-424.
- Bolivar, S. L., Broxton, D. E., and Olsen, C. E., 1978, Uranium hydrogeochemical and stream sediment reconnaissance of the Denver and Greeley NTMS quadrangles, Colorado, GJBX-60(78), US DOE, Grand Junction, CO, 138 p.
- Cheadle, J., III, 1977, Computer program for universal Transverse Mercator map projection, GJBX-54(77), US ERDA, Grand Junction, CO, 11 p.
- Curtis, B. F., 1960, Major geologic features of Colorado, in Guide to the geology of Colorado (Weimer, R. J., and Haun, J. D., Eds.), Geol. Soc. of America, Rocky Mountain Assoc. of Geol., Colorado Scientific Society, Denver, CO.
- Fenneman, N. M., 1931, Physiography of the western United States, McGraw Hill Book Co., Inc., New York, NY, pp. 1-91.
- Gabelman, J. W., 1955, Uranium deposits in paludal black shales, Dakota sandstone, San Juan basin, New Mexico, in Contr. to the Geology of Uranium and Thorium by the United States Geological Survey and Atomic Energy Commission for the United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva, Switzerland, Prof. Paper 300, US Geol. Survey, Washington, DC, pp. 303-320.
- Gott, G. B., Wolcott, D. E., and Bowles, C. G., 1974, Stratigraphy of the Inyan Kara group and localization of uranium deposits, Southern Black Hills, South Dakota and Wyoming, Prof. Paper 763, US Geol. Survey, Washington, DC, 57 p.
- Grimbert, A., and Loriol, R., 1968, Geochemical prospecting for uranium, AEC-tr-7579, Trans. from French, US AEC, Off. Tech. Info., Springfield, VA, 38 p.
- Grose, L. T., 1972, Tectonics, in Geologic Atlas of the Rocky Mountain Region, United States of America, Mallory, W. W. (Ed. in chief), Rocky Mountain Assoc. of Geol., Denver, CO, pp. 35-44.
- Hansel, J. M., and Martell, C. J., 1977, Automated energy-dispersive x-ray determination of trace elements in stream sediments, GJBX-52(77), US DOE, Grand Junction, CO, 8 p.

- Hawley, C. C., Robeck, R. C., and Dyer, H. B., 1968, Geology, altered rocks and ore deposits of the San Rafael swell, Emery County, Utah, Bull. 1239, US Geol. Survey, Washington, DC, 113 p.
- Hues, A. D., Henicksman, A. L., Ashley, W. H., and Romero, D., 1977, The fluorometric determination of uranium in natural waters, GJBX-24(77), US ERDA, Grand Junction, CO, 11 p.
- MacLachlan, M. E., 1972, Triassic system, in Geologic Atlas of the Rocky Mountain Region, United States of America, Mallory, W. W. (Ed. in chief), Rocky Mountain Assoc. of Geol., Denver, CO, pp. 166-176.
- Mardirosian, C. A. (compiler), 1976, Mining districts and mineral deposits of Colorado, map (1:1 000 000 scale).
- McConaghy, J. A., and Colburn, G. W., 1964, Records of wells in Colorado, Basic-Data Release No. 17, Colorado Conservation Board, Denver, CO, 384 p.
- McLaughlin, T. G., 1954, Geology and ground-water resources of Baca County, Colorado, Water-supply Paper 1256, US Geol. Survey, Washington, DC, 323 p.
- Nelson-Moore, J. L., Collins, D. B., and Hornbaker, A. L., 1978, Radioactive mineral occurrences of Colorado and bibliography, Bull. 40, Colorado Geol. Survey, Denver, CO, 1054 p.
- NOAA (National Oceanic and Atmospheric Administration) 1977, Climatological data, Colorado, v. 82, nos. 4-10, US Dept. of Commerce, Asheville, NC.
- Nunes, H. P., and Weaver, T. A., 1978, Hydrogeochemical and stream sediment reconnaissance of the National Uranium Resource Evaluation program, in the Rocky Mountain states of New Mexico, Colorado, Wyoming, and Montana and the state of Alaska, July-September 1977, GJBX-27(78), US DOE, Grand Junction, CO, 14 p.
- Pearl, R. H., 1974, Geology of the ground water resources in Colorado, Spec. Pub. 4, Colorado Geol. Survey, Denver, CO, 47 p.
- Peterson, J. A., 1972, Jurassic system, in Geologic Atlas of the Rocky Mountain Region, United States of America, Mallory, W. W. (Ed. in chief), Rocky Mountain Assoc. of Geol., Denver, CO, p. 185.
- Saucier, A. E., 1976, Tectonic influence on uraniferous trends in the late Jurassic Morrison formation, Special Publication no. 6, New Mexico Geol. Soc., Socorro, NM, pp. 151-157.
- Scott, G. R., 1968, Geologic and structure contour map of the La Junta quadrangle, Colorado and Kansas, Map I-560 (1:250 000 scale), US Geol. Survey, Washington, DC.
- Shannon, S. S., Jr., 1979, Uranium hydrogeochemical and stream sediment reconnaissance of the Lamar quadrangle, Colorado, LA-7342-MS, Los Alamos Scientific Laboratory, Los Alamos, NM (in preparation).

- Sharp, R. R., Jr., 1977, The LASL approach to uranium hydrogeochemical reconnaissance, in Proc. Symposium on Hydrogeochemical and Stream Sediment Reconnaissance for Uranium in the United States, March 16-17, GJBX-77(77), US ERDA, Grand Junction, CO, pp. 353-373.
- Sharp, R. R., Jr., and Hill, D. E., 1978, Uranium hydrogeochemical and stream sediment reconnaissance data from the area of the Teller, Bendeleben, Candle and Kateel River quadrangles, Seward Peninsula and vicinity, Alaska, GJBX-85(78), US DOE, Grand Junction, CO, 161 p.
- Swanson, V. E., 1955, Uranium in marine black shales of the United States in Contr. to the Geology of Uranium and Thorium by the United States Geological Survey and Atomic Energy Commission for the United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva, Switzerland, Prof. Paper 300, US Geol. Survey, Washington, DC, pp. 451-456.
- Texas Instruments, Inc., 1978, Aerial radiometric and magnetic reconnaissance survey of portions of the Great Plains and central lowlands, La Junta quadrangle, Colorado, v. 2-I, GJBX-100(78), US DOE, Grand Junction, CO.
- Trimble, L. M., and Doelling, H. H., 1977, Geology and ore deposits of the San Rafael River mining area, Emery County, Utah, Open-File Report 20, Utah Geol. and Mineralog. Survey, Salt Lake City, UT, 246 p.
- USGS (United States Geological Survey), 1955, La Junta, Colorado, Topographic Map NJ13-9 (1:250 000 scale), US Geol. Survey, Denver, CO.
- USGS, 1966, Pikes Peak, Map NJ-13 (scale 1:1 000 000), US Geol. Survey, Washington, DC.
- USGS, 1970, The national atlas of the United States of America, US Geol. Survey, Washington, DC, 417 p.
- Voegeli, P. T., Sr., and Hershey, L. A., 1965, Geology and ground-water resources of Prowers County, Colorado, Water-Supply Paper 1772, US Geol. Survey, Washington, DC, 101 p.

SCALE 1:250 000

SAMPLE LOCATION OVERLAY FOR THE LA JUNTA NTMS QUADRANGLE, COLORADO

The LASL sample location numbers above are the same as those used in APPENDIX I except the leading two alphanumeric characters and leading zeros have been dropped.

VERNAL	CRAIG	GREELEY	STERLING
GRAND JUNCTION	LEADVILLE	DENVER	WYOMING
MOAB	MONTROSE	PUEBLO	LAMAR
CORTIZ	DURANGO	TRINIDAD	LA JUNTA

COLORADO

University of California
LOS ALAMOS SCIENTIFIC LABORATORY
Post Office Box 1663 Los Alamos, New Mexico 87545
An affirmative action/equal opportunity employer

FOR THE LA JUNTA NTWS QUADRANGLE, COLORADO

SAMPLE LOCATION OVERLAY

LA JUNTA	LA JUNTA	LA JUNTA	LA JUNTA
LA JUNTA	LA JUNTA	LA JUNTA	LA JUNTA
LA JUNTA	LA JUNTA	LA JUNTA	LA JUNTA
LA JUNTA	LA JUNTA	LA JUNTA	LA JUNTA

one the same as those used in APPENDIX I
except the leading two alphanumeric characters
and leading zeros have been dropped

LEGEND

SYMBOLS	CONCENTRATIONS (ppb)			
	0.00 - 0.50	0.51 - 1.00	1.01 - 2.00	2.01 - 5.00
SPRING				
SURFACE STREAM				
WELL				

SCALE 1:250 000

URANIUM CONCENTRATIONS (ppb) IN WATERS
OVERLAY TO THE
LA JUNTA NTMS QUADRANGLE, COLORADO

LA JUNTA NTMS QUADRANGLE, COLORADO
OVERLAY TO THE
URANIUM CONCENTRATIONS (ppb) IN WATERS

SYMBOLS		CONCENTRATIONS (ppb)	
WELL	○	0.01 - 20.00	○
SURFACE STREAM	□	20.01 - 50.00	□
SPRING	◇	50.01 - 100.00	◇

SYMBOLS		CONDUCTIVITY ($\mu\text{mho/cm}$)			
◇	SPRING	○	○	○	0 - 50
		○	○	○	51 - 100
		○	○	○	101 - 200
		○	○	○	201 - 500
		○	○	○	501 - 1000
		○	○	○	1001 - 2000
		○	○	○	2001 - 5000
		○	○	○	> 5000
□	SURFACE STREAM				
○	WELL				

SCALE 1:250 000

5 0 5 10 15 20 Miles
5 0 5 10 15 20 25 30 Kilometers

**CONDUCTIVITIES ($\mu\text{mho/cm}$) IN WATERS
OVERLAY TO THE
LA JUNTA NTMS QUADRANGLE, COLORADO**

LEGEND

SYMBOLS	CONCENTRATIONS (ppm)				
◇	WET SPRING	◇	◇	◇	0.0 - 3.0
□	WET STREAM	□	□	□	3.1 - 4.0
⊠	DRY STREAM	⊠	⊠	⊠	4.1 - 5.0
+	DRY SPRING	+	+	+	5.1 - 6.0
					6.1 - 7.0
					7.1 - 8.0
					8.1 - 12.0
					> 12.0

URANIUM CONCENTRATIONS (ppm) IN SEDIMENTS
OVERLAY TO THE
LA JUNTA NTMS QUADRANGLE, COLORADO

LEGEND

SYMBOLS	CONCENTRATIONS (ppm)
+	DRY SPRING
◇	WET SPRING
□	WET STREAM
⊠	DRY STREAM
+	0.0 - 3.0
◇	3.1 - 4.0
◇	4.1 - 5.0
◇	5.1 - 6.0
◇	6.1 - 7.0
◇	7.1 - 8.0
◇	8.1 - 12.0
◇	> 12.0

LA JUNTA NTMS QUADRANGLE, COLORADO
OVERLAY TO THE
URANIUM CONCENTRATIONS (ppm) IN SEDIMENTS

LEGEND

SYMBOLS	CONCENTRATIONS (ppm)
◇ WET SPRING	0.0 - 10.0
□ WET STREAM	10.1 - 12.0
⊠ DRY STREAM	12.1 - 14.0
+	14.1 - 16.0
	16.1 - 18.0
	18.1 - 20.0
	20.1 - 40.0
	> 40.0

THORIUM CONCENTRATIONS (ppm) IN SEDIMENTS
OVERLAY TO THE
LA JUNTA NTMS QUADRANGLE, COLORADO

University of California
LOS ALAMOS SCIENTIFIC LABORATORY
Post Office Box 1663 Los Alamos, New Mexico 87545
An affirmative action/equal opportunity employer

LA JUNTA NTMS QUADRANGLE, COLORADO
OVERLAY TO THE
THORIUM CONCENTRATIONS (ppm) IN SEDIMENTS

LEGEND

SYMBOLS		CONCENTRATIONS (ppm)	
+	DRY SPRING	+	0.0 - 10.0
×	DRY STREAM	×	10.1 - 15.0
□	WET STREAM	□	15.1 - 20.0
◇	WET SPRING	◇	20.1 - 40.0
+		+	> 40.0