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GEOLOGY

**Uranium Hydrogeochemical and
Stream Sediment Reconnaissance of the
Gillette NTMS Quadrangle, Wyoming,
Including Concentrations Of
Forty-Two Additional Elements**

University of California

LOS ALAMOS SCIENTIFIC LABORATORY

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GEOLOGICAL SURVEY OF WYOMING

U. S. DEPARTMENT OF ENERGY
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**Uranium Hydrogeochemical and
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Forty-Two Additional Elements**

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U. S. DEPARTMENT OF ENERGY
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URANIUM HYDROGEOCHEMICAL AND STREAM SEDIMENT RECONNAISSANCE
OF THE GILLETTE NTMS QUADRANGLE, WYOMING,
INCLUDING CONCENTRATIONS OF FORTY-TWO ADDITIONAL ELEMENTS

by

Richard G. Warren

ABSTRACT

During 1976 and 1977, 752 water and 843 sediment samples were collected from 1419 locations within the 17 700-km² area of the Gillette quadrangle, Wyoming, by private contractors for the Los Alamos Scientific Laboratory. Water samples were collected primarily from wells, and also from springs, ponds, and streams; sediment samples were collected primarily from stream channels, and also from springs and ponds. Each water sample was analyzed for uranium and each sediment sample was analyzed for 43 elements, including uranium and thorium. All field and analytical data are listed in the appendixes of this report.

Uranium concentrations in water samples range from below the detection limit of 0.02 to 212.20 parts per billion (ppb) and have a median of 1.10 ppb. The highest background uranium concentrations, as well as the highest individual uranium values, are in areas where favorable host units for uranium mineralization crop out. These units are the Wasatch and Fort Union formations in the Powder River Basin and the Inyan Kara group in the Black Hills.

Uranium concentrations in sediment samples range from 0.64 to 29.83 parts per million (ppm) and have a median of 3.24 ppm. Background uranium concentrations are strongly controlled by the exposed geologic unit, and range from 4-8 ppm for the Cretaceous Colorado group to 1-3 ppm for the Triassic and Paleozoic units exposed in the Black Hills.

Several areas where the Wasatch and Fort Union formations are exposed exhibit uranium concentrations in sediment samples that are slightly, but distinctly, above background values for these units. All of these areas are also associated with notably high uranium concentrations in water samples. Because epigenetic uranium mineralization in economically important areas can exhibit a similar geochemical signature, these areas within the Gillette quadrangle should be further examined for the possible presence of uranium mineralization.

I. INTRODUCTION

Uranium and other elemental data resulting from the Hydrogeochemical and Stream Sediment Reconnaissance (HSSR) of the Gillette National Topographic Map Series (NTMS) quadrangle, Wyoming, by the Los Alamos Scientific Laboratory (LASL) are reported herein. This study was conducted as part of the United States Department of Energy's National Uranium Resource Evaluation (NURE) and will ultimately be integrated with data from other NURE programs (e.g., airborne radiometric surveys and geological investigations). The NURE is designed to provide improved estimates of the availability and economics of nuclear fuel resources and make available to industry information for use in the development and production of uranium resources. The LASL is responsible for conducting the HSSR primarily in the Rocky Mountain states of New Mexico, Colorado, Wyoming, and Montana and in Alaska (Sharp, 1977).

Totals of 752 water and 843 sediment samples were collected from 1419 stream, spring, well, and pond locations throughout the 17 700-km² area of the Gillette NTMS quadrangle. The sample collection was contracted during 1976 and 1977, and followed procedures described by Sharp and Aamodt (1978). This report contains the results of analyses for uranium in the water samples and uranium and 42 additional elements in the sediment samples. All field and analytical data are presented in Appendix I. These data are also available on magnetic tape from: GJOIS Project, UCC-ND, Computer Applications Department, 4500 North Building, Oak Ridge National Laboratory, P. O. Box X, Oak Ridge, Tennessee 37830. Additionally, graphic overlays produced at a scale of 1:250 000 are found in the rear pocket of this report for use with the NTMS topographic map and the geologic map (Love et al, 1978) of the Gillette quadrangle. Included are a sample location overlay (Plate I), overlays for uranium concentrations (Plate II) and conductivities (Plate III) in waters, and overlays for uranium (Plate IV) and thorium (Plate V) concentrations in sediments.

II. GENERAL DESCRIPTION OF THE QUADRANGLE

Location and Geographic Setting

The Gillette NTMS quadrangle includes all of Crook County, most of Campbell County, and a portion of Weston County in northeastern Wyoming (Fig. 1). A small portion of South Dakota and even smaller portion of Montana are also included within the eastern and northern quadrangle boundaries, respectively. The principal population centers (1970 census) are Gillette (7000) and Moorcroft, Upton, and Sundance (each about 1000), all in Wyoming. Ranching constitutes the chief land use, with some small areas devoted to grain farming. Major industries include coal mining in the western part of the quadrangle, oil and gas production throughout the area, and uranium and bentonite mining along the flanks of the Bear Lodge Mountains and Black Hills.

The quadrangle lies within the Black Hills and Powder River Basin sections of Great Plains physiographic province of Fenneman (1931). The Black Hills, centered to the southeast in South Dakota, consist of tree- and grass-covered peaks and dissected plateaus rising to elevations of about 1800-2100 m in the eastern portion of the Gillette quadrangle (Fig. 1). The Bear Lodge Mountains are a subsidiary range of the Black Hills. These highlands merge westward into the Powder River Basin, a region of low rolling grass- and sage-covered hills and broad valleys with locally steep escarpments,

Fig. 1. Location and drainage map of the Gillette NTMS quadrangle, Wyoming.

high isolated buttes, and subdued badlands at elevations generally between 1100-1500 m in the Gillette quadrangle.

General Climate and Weather during the Sampling Periods

A semi-arid continental climate, which is characterized by warm summers and cold winters, prevails within the Gillette quadrangle. Mean minimum and maximum temperatures for Gillette, representative of the entire area, are 13°C

and 31°C for July and -11°C and 1°C for January, respectively (Becker and Aleya, 1964a). Annual precipitation ranges between 300 mm and 400 mm in the Powder River Basin, and between 400 mm and 500 mm in the Black Hills and Bear Lodge Mountains. A strong maximum in precipitation probability occurs in early June and a less pronounced minimum during December and January (Becker and Aleya, 1964b).

The samples for the western half of the quadrangle were collected during three periods in 1976: March 27-April 19, July 20-26, and October 8-10. Those for the eastern half were collected between August 18 and October 3, 1977. Statistics compiled by the National Oceanic and Atmospheric Administration (NOAA) in 1976 and 1977 indicate the following weather conditions preceding and during the sampling periods. Precipitation throughout 1976 was near normal, except for June, which was well above average. Major storms during the 1976 sampling periods occurred April 16-18 and July 19-21. Sampling during 1977 was undertaken during a relatively wet summer that was preceded by a relatively wet winter and dry spring. Major storms during the 1977 sampling period occurred August 22-27, September 21-23, and September 30-October 1.

III. GEOLOGY

Rock units representing all geologic periods except the Silurian and Devonian are exposed within the Gillette quadrangle (Table I). Small outcrops of Precambrian metamorphic and igneous rocks are exposed in two areas in the Black Hills, which were domed by igneous intrusion during the early Tertiary. More extensive exposures of similar basement rocks are found southeast of the quadrangle along the northwest-trending axis of the Black Hills uplift (Slaughter, 1968). Paleozoic and lower Mesozoic units are exposed within the Black Hills uplift (Fig. 2). Paleozoic rocks are predominantly marine and consist largely of carbonate and sandstone units, whereas lower Mesozoic rocks are shallow marine or continental shale and sandstone units and are often gypsiferous. Cretaceous rocks, which border the Black Hills, are predominantly a marginal marine sequence of shale and sandstone. The youngest stratigraphic units that are widely exposed are the Eocene Wasatch, Paleocene Fort Union, and Cretaceous Lance formations. These units are continental sandstones and shales that crop out within the Powder River Basin in the western half of the quadrangle (Fig. 2). Only scattered remnants of the middle and late Tertiary units that formerly blanketed the entire area remain (Davis, 1970).

Sills, dikes, and plugs of various alkalic rocks are exposed throughout several areas in the Black Hills (Fig. 2). These igneous bodies are generally porphyritic (Robinson et al, 1964; Love et al, 1978). All K/Ar ages determined are the range 39-54 Myr (Love et al, 1978); consequently, these igneous bodies were emplaced during the Eocene.

Two major structural features, the Black Hills uplift and Powder River Basin, are present within the quadrangle; they are separated by the Black Hills monocline (Fig. 2). The Black Hills monocline is a belt of steeply dipping rocks about 3 to 10 km wide, across which structural relief is about 1200 m (Robinson et al, 1964). Elsewhere, rock units dip gently away from the axis of the Black Hills uplift toward the Powder River Basin to the west or the Williston basin to the northeast of the quadrangle. Total structural relief within the quadrangle is about 3000 m.

TABLE I
ROCK UNITS OF THE GILLETTE QUADRANGLE, WYOMING

Age	Rock Unit (thickness)	Lithology
Quaternary	Surficial deposits	Unconsolidated rock debris. Includes alluvial, terrace, and landslide deposits.
Miocene	Unnamed (<16.5 m)	Tuff, conglomerate, sandstone, and siltstone.
Oligocene	White River formation (<60 m)	Tuffaceous claystone, siltstone, and lenticular conglomerate.
Eocene	Intrusive rocks	Monzonite and syenite porphyry; various alkalic rocks.
	Wasatch formation (<915 m)	Arkosic sandstone, lenticular conglomerate, siltstone, carbonaceous shale, and numerous coal beds.
Paleocene	Fort Union formation (<1460 m)	Sandstone, drab shale, siltstone, and coal. Consists of Tongue River, Lebo, and Tullock members.
Cretaceous	Lance formation (610-760 m)	Somber shale and massive lenticular concretionary sandstone.
	Montana group	
	Fox Hills sandstone (45-60m)	Marine sandstone and gray, sandy shale.
	Pierre shale (510-625 m)	Dark-gray to black concretionary marine shale with bentonite beds.
	Colorado group	
	Niobrara formation (40-60 m)	Gray to yellow marl and limy shale.
	Carlisle shale (135-230 m)	Dark-gray to black sandy shale.
	Greenhorn limestone (20-110 m)	Gray limestone, marl, and limy sandstone with limy concretionary shale.
	Belle Fourche shale (215-245 m)	Dark-gray to black bentonitic concretionary shale.
	Mowry shale (60-75 m)	Black, hard, siliceous shale with many bentonite beds.
	Newcastle sandstone (0-30 m)	Gray sandstone, sandy shale, and siltstone; some bentonite and coal.
	Skull Creek shale (60-75 m)	Black fissile shale.
	Inyan Kara group	
Jurassic	Fall River sandstone (30-45 m)	Brown sandstone, siltstone, and shale.
	Lakota formation (20-70 m)	Intertonguing variegated claystone and sandstone, gray conglomeratic sandstone, and coal.
	Morrison formation (0-60 m)	Variegated claystone and lenticular silty sandstone
	Sundance formation (60-130 m)	Greenish-gray glauconitic sandstone and shale underlain by red and gray nonglauconitic sandstone and shale.
Triassic	Gypsum Spring formation (0-40 m)	Massive white gypsum, locally red and green claystone at top.
	Spearfish formation (60-275 m)	Red shale, red siltstone, and white gypsum.
Permian and Pennsylvanian	Minnelusa formation (175-274 m)	Sandstone, solution breccia and gypsum, thin limestone, and red and black shale.
Mississippian	Pahasapa limestone (155-365 m)	Gray massive dolomite.
	Englewood limestone (15 m)	Pink, thin-bedded limestone.
Ordovician	Whitewood dolomite	Gray to tan dolomite.
	Winnipeg formation (0-90 m)	Green shale and siltstone.
Ordovician and Cambrian	Deadwood formation (90-270 m)	Brown sandstone, greenish-gray shale, and gray limestone.
Precambrian X		Granite, with some metasedimentary rocks. Exposed only in Bear Lodge Mountains.
Precambrian W		Mica schist, with lesser granite and amphibolite. Exposed only in Negro Hill area.

From Love et al, 1978.

Fig. 2. Generalized geologic map of the Gillette quadrangle, Wyoming.

Within the Black Hills uplift, northward- or northwestward-trending folds with up to 120 m amplitude and nearly circular domes and depressions shaped by igneous intrusions are common (Robinson et al, 1964). The Powder River Basin is a large, asymmetric, northwest-trending basin with the axis lying west of the quadrangle along its southwestern side (Curry, 1971). This basin contains a thickness of about 2400 m of Eocene through late Cretaceous age continental sediments.

The coal-rich Paleocene Fort Union and Eocene Wasatch formations were deposited in the Powder River Basin by large northward-flowing streams meandering northward through wide, swampy floodplains. Laramide deformation began in Paleocene time, but was most intense in Eocene time, resulting in exposure of basement rocks of the Bighorn uplift to the west (Curry, 1971). This deformation abruptly ceased in the Oligocene, and large thicknesses of flat-lying middle and late Tertiary tuffaceous sediments accumulated. Regional Neogene uplift initiated stream downcutting, which has removed most of the post-Laramide sedimentary sequence, leaving only scattered remnants of the Oligocene White River and younger formations within the Gillette quadrangle (Davis, 1970).

IV. HYDROLOGY

All surface drainage in the Gillette quadrangle is within the Missouri River Basin. The northward-flowing Powder and Little Powder Rivers drain the western half of the quadrangle, and the northeastward flowing Little Missouri and Belle Fourche Rivers drain the eastern half (Fig. 1). A small part of the southeastern part of the quadrangle is drained by a tributary of the Cheyenne River. All of these streams are intermittent and flow primarily following seasonal rains of moderate to heavy intensity during late spring and summer. Annual runoff is less than 25 mm within the Powder River Basin and increases to about 75 mm at the eastern boundary of the quadrangle in the Black Hills (Hembree et al, 1952).

Streams within the quadrangle generally carry large amounts of suspended sediment. These loads are highest for streams draining areas where easily erodable Mesozoic units are exposed and are lowest in areas where resistant Paleozoic and Precambrian units crop out. Because suspended sediment load generally increases together with stream flow, tributaries are often clear while major streams carry significant suspended loads. The average suspended sediment load for the Powder River in the region is about 2% (Hembree et al, 1952).

Surface water in major streams throughout the area generally contains between 500-1000 parts per million (ppm) total dissolved solids (TDS) during high flow, and 1000-2000 ppm TDS during low flow. Major streams in the Black Hills area are calcium sulfate waters, whereas the Little Powder River carries sodium sulfate water and the Little Missouri River contains sodium-calcium sulfate water (Hodson et al, 1973).

Ground water is generally obtained from bedrock aquifers, although alluvial aquifers produce in the Little Missouri and Belle Fourche Rivers. The primary aquifers in the Powder River Basin are sandstone beds within the Wasatch and Fort Union formations; the Lance and Fox Hills formations are of lesser importance (Breckenridge et al, 1974). In the Black Hills, the Minnelusa and Pahasapa formations yield large supplies of water, the Inyan Kara group yields moderate supplies, and the Spearfish, Gypsum Springs and Sundance formations yield small supplies (Whitcomb and Morris, 1964).

Aquifers in the Powder River Basin generally provide water containing 500-1500 ppm TDS, except for the Fox Hills sandstone, which provides water generally containing <1000 ppm TDS (Littleton, 1950; Hodson et al, 1973). The Fox Hills sandstone is tapped only where a large supply of good quality water is needed due to its excessive depth within much of the basin; the Gillette municipal water supply is obtained from this source (Littleton, 1950). Ground waters from the Fort Union formation are generally of the sodium bicarbonate type, although those containing >2000 ppm TDS are of the sodium sulfate type. The Wasatch formation generally yields sodium sulfate water, and less commonly, sodium bicarbonate or calcium sulfate water. No dominant water type characterizes the Lance or Fox Hills formations.

Within the central portion of the Black Hills, large quantities of calcium bicarbonate water generally containing <1000 ppm TDS are provided by aquifers in both the lower portion of the Minnelusa formation and by cavernous zones within the Pahasapa limestone. The upper part of the Minnelusa formation contains gypsum beds, resulting in calcium sulfate water containing between 500-2000 ppm TDS. The Spearfish and Gypsum Spring formations are also gypsum bearing; they and the Sundance formation yield calcium sulfate waters containing very high (2000-3000 ppm) TDS contents (Whitcomb and Morris, 1964; Hodson et al, 1973). Along the flanks of the Black Hills the preferred aquifer is the Inyan Kara group, which generally provides sodium sulfate or less commonly sodium bicarbonate waters containing 300-3000 ppm TDS.

V. ECONOMIC GEOLOGY

The most economically important resources within the Gillette quadrangle are coal and petroleum; less important resources are uranium and bentonite. Although the largest gold mine in the US, the Homestake Mine, is located in the Black Hills just southeast of the quadrangle, no important base- or precious-metal resources have yet been defined within the area.

About 84% of Wyoming's strippable coal is located in Campbell County (Fig. 3), most of which is within the Gillette quadrangle (Breckenridge et al, 1974). Most reserves consist of low-sulfur subbituminous coal contained in the Tongue River member of the Fort Union formation and in the Wasatch formation. Annual coal production has rapidly increased from 1.6 million tons in 1973 and will probably increase with 9 to 11 large strip mines planned for production. By 1985, an estimated 565 million tons will have been strip mined in Campbell County from the 20- to 35-m-thick Wyodak-Anderson coal bed (Glass, 1976).

Oil and gas is produced from about 150 fields throughout the east flank of the Powder River Basin (Glass et al, 1975). Annual production during the early 1970s was about 30 million barrels of oil and about 60 billion cubic feet of gas, with a total production through 1973 of about 262 million barrels of oil and 357 billion cubic feet of gas. Reservoirs are controlled almost entirely by stratigraphic traps. About 51% of the oil has been produced from the Cretaceous Newcastle (Muddy) sandstone and 42% from the Permo-Pennsylvanian Minnelusa formation; almost all of the gas (97%) has been produced from the Newcastle Sandstone (Breckenridge et al, 1974).

All uranium within the quadrangle has been produced from mines in the northern Black Hills district within Crook County. Combined with the southern Black Hills district southeast of the quadrangle, about four million pounds of U_3O_8 have been produced from sandstones of the lower Cretaceous Inyan Kara

Fig. 3. Coal and metal-mining areas in the Gillette quadrangle, Wyoming.

group in the Black Hills (Gott et al, 1974). Half of this uranium has been extracted from the Hauber Mine in the New Haven area (Fig. 3). Despite the existence of several large uranium districts within the Powder River Basin just to the south (Davis, 1970), no conventional uranium mining has occurred in this region within the Gillette quadrangle. However, in situ leach mining of uranium has recently been initiated in the Sundance Project, near Oshoto just west of the Black Hills monocline (Larson, 1978).

TABLE II
METAL-MINING AREAS IN THE GILLETTE QUADRANGLE, WYOMING

<u>Metal-Mining Area in Fig. 3 (Metals Produced)</u>	<u>Description</u>
Aladdin (U, V)	Small open-pit mines in sandstone of Fall River formation containing abundant organic carbonaceous material. Carnotite and autunite are the important uranium-bearing minerals.
New Haven (Hulett Cr) and Elkhorn Cr (U, V)	All deposits consist of carnotite and tyuyamunite above the water table, and uraninite and coffinite below. The largest deposit, the Hauber Mine (New Haven district), occurs in carbonaceous sandstone of the basal Lakota formation; all other deposits are found in sandstone of the Fall River formation. Detailed descriptions in Davis and Izett (1962).
Barlow Canyon (U, V)	All deposits consist of carnotite and other oxidized uranium minerals hosted by the Fall River formation.
Carlile (U, V)	Near surface deposits consist of carnotite and tyuyamunite; deeper deposits contain uraninite and coffinite. All deposits are in the Lakota formation. More detailed descriptions in Bergendahl et al (1961) and Pillmore and Mapel (1963).
Bear Lodge Mountains (REE, Th, Mn, Fe, Au, F)	Rare earth elements (REE), thorium and uranium are associated with iron-manganese oxides filling fractures in zones of intensely altered monzonite and syenite porphyry. Gold is found in similar settings. Fluorite lenses occur primarily in limestone and also in calcareous sandstone, often associated with Tertiary intrusive rocks.
Negro Hill (Sn, Au)	Placer deposits in both Sand Creek and Bear Gulch contain gold and cassiterite. On the divide between these drainages, cassiterite is associated with columbite, tantalite, scattered tourmaline, and wolframite in Precambrian granite and pegmatite within Tertiary porphyry.
Black Butte (Pb, Zn, Ag)	Cerussite cements and replaces brecciated Paleozoic limestone at the contact with andesite porphyry.

Compiled from Elevatorski (1976), Glass et al (1975), Geological Survey of Wyoming (1970), Finch (1967), and Osterwald et al (1966).

Uranium mineralization occurs within both the Lakota and Fall River formations of the Inyan Kara group, although the largest single deposit at the Hauber Mine occurs in the basal Lakota formation. The Lakota consists dominantly of continental sandy sediments that are lithologically similar to, and in most places conformable with, the underlying Morrison. The Fall River is a marginal marine sequence lithologically similar to the overlying Skull Creek shale (Waage, 1959; Hart, 1968; Renfro, 1969). The contact between the two formations is a transgressive disconformity of regional extent; consequently, the Lakota-Fall River sequence has a striking lithologic similarity to the Jackpile-Dakota sequence in the Laguna district of the Grants Mineral Belt.

Uranium deposits contain oxidized uranium minerals such as carnotite and tyuyamunite when they are above the ground water table and uraninite and coffinite with vanadium oxides when below (Robinson et al, 1964). Unoxidized ores have an average vanadium-to-uranium ratio of 1.5, and the uranium and vanadium minerals are intimately associated with pyrite, marcasite, and calcite (Hart, 1968). Ore bodies form irregular tabular bodies (Bergendahl et al, 1961; Robinson et al, 1964). These shapes are thought to result from the passage of ground-water solution fronts through a host unit having a wide range in permeability, which produces a complex variation of the typical "roll" deposit (Hart, 1968). The source of the uranium deposited by meteoric solutions is thought to be ancient granitic highlands (Stuckless, 1979), the mineralized units themselves (Renfro, 1969), or tuffaceous and ash-rich volcanic material in middle and late Tertiary units that once blanketed the entire area (Davis, 1970; Dahl and Hagmaier, 1976).

One model that has successfully defined subsurface exploration targets in Powder River Basin roll deposits hypothesizes that a change from sulfate to bicarbonate ground water type down hydrologic gradient defines an area where active biochemical reduction to sulfide occurs (Dahl and Hagmaier, 1976). The hypothetical reduction of sulfate to sulfide results in pyrite formation and accompanying precipitation of uranium. If current ground-water conditions are similar to those during earlier ore formation, then the presence of a uranium ore body is suspected between the area of sulfate water recharge and bicarbonate water discharge (Bowles, 1968; Butler, 1969; Gott et al, 1974; Dahl and Hagmaier, 1976). For ground water associated with the Inyan Kara group in the Black Hills, the dominant anion change from sulfate to bicarbonate is also accompanied by a change in dominant cation from calcium to sodium (Bowles, 1968; Gott et al, 1974).

The northern and western Black Hills contains the largest US reserve of high grade sodic bentonite (Geological Survey of Wyoming, 1970). Numerous bentonite beds are present within the Cretaceous section; however, 95% of the bentonite is produced from the commonly 2- to 3-ft-thick clay spur bed at the top of the Mowry shale (Knechtel and Patterson, 1962). Annual bentonite production from Crook and Weston Counties during the past 15 years has been between 1-2 million tons, approximately two-thirds of the total Wyoming production (Wolfbauer, 1976).

Three areas within the quadrangle (Fig. 3) have produced small quantities of base, precious, and radioactive metals (Osterwald et al, 1966; Geological Survey of Wyoming, 1970). Thorium-rich veins in the Bear Lodge Mountains (Table II) also have associated high uranium values, and 14 uranium anomalies have been identified in this area by a closely-spaced aerial radiometric survey (geoMetrics, 1979).

VI. EVALUATION OF THE DATA

Water and sediment samples from the western half of the quadrangle were collected by a subcontractor in 1976 and those from the eastern half in 1977. Uranium analyses for samples collected during 1976 are also reported in Morris (1977). Uranium analyses for HSSR samples in adjacent quadrangles have also been published for the Ekalaka quadrangle (Chaney and Bolivar, 1978) and the Newcastle quadrangle (Goff et al, 1980). Analytical results for the Newcastle quadrangle include 42 additional elements in the sediment samples.

Discussion of analytical results for both water and sediment samples is limited to variations in background uranium concentrations, individual high concentrations, and elemental associations for samples with high uranium concentrations. The uranium thresholds arbitrarily selected for discussion are 20 parts per billion (ppb) for water samples and 8 ppm for sediment samples.

Uranium Concentrations in Water Samples

Water samples were collected from 752 locations primarily from wells, and also from springs, streams, and ponds (Fig. 4), at an average density of one per 24 km². Water samples were not obtained from areas comprising approximately one-third of the quadrangle primarily due to unavailability of water and denial of access to private lands (Fig. 5).

Uranium concentrations were measured for all water samples (Appendix I-A). These values range from below the detection limit of 0.02 ppb to 212.20 ppb, with a median value of 1.10 ppb (Fig. 4). Median uranium values are similar for the various sample types and consequently no distinction is made for purposes of data evaluation. This similarity suggests good interaction between ground and surface waters in the area. All uranium values >20 ppb are listed in Table III, which includes descriptions of the local uranium background, conductivity, and geology. Exact sample locations can be found either by matching uranium values in Table III with those in Appendix I-A, or by matching the locations shown in Fig. 5 with those on Plate II. Background uranium concentrations are shown for the quadrangle in Fig. 5. Background values for both uranium and conductivity (Plate III) are generally lower in the Black Hills uplift than in the Powder River Basin.

High uranium concentrations (>20 ppb) for samples from the Powder River Basin (areas A-I, Table III) are nearly all associated with high conductivities (>2000 $\mu\text{mho/cm}$), whereas in the Black Hill uplift (areas J-L) samples with high uranium concentrations are associated with conductivities that are low (<1000 $\mu\text{mho/cm}$) or intermediate (1000-2000 $\mu\text{mho/cm}$). Within both areas, high uranium concentrations are generally associated with high background uranium values (Fig. 5).

Samples with high uranium concentrations in the Powder River Basin are primarily associated with either the Wasatch formation (areas A through C in Fig. 5) or the Tulloch or Tongue River members of the Fort Union formation (areas D through I in Fig. 5). Several samples with high uranium concentrations cluster in areas A, C, D, E, and I; the majority of samples in these areas are from ground-water sources. Both the Wasatch formation and Tulloch and Tongue River members of the Fort Union formation contain massive sandstone units that lie at similar stratigraphic horizons as large deposits in the Powder River Basin south of the Gillette quadrangle (Davis, 1970). Consequently, these areas may be favorable for uranium mineralization. Areas A, C, and E, in particular, are associated with high subsurface sand-to-shale

a. All waters *

* The 15 natural pond waters are included in this histogram only.

b. Well waters

c. Spring waters

d. Artificial pond waters

e. Stream waters

Fig. 4. Histograms and statistical data for uranium concentrations in water samples from the Gillette quadrangle, Wyoming.

Fig. 5. Background uranium concentrations and location of samples containing >20 ppb uranium in water samples from the Gillette quadrangle, Wyoming.

ratios that indicate paleostream channel locations for the Wasatch or Fort Union formations (Figs. 4-13 in BFEC, 1976). Therefore, samples with high uranium concentrations in these areas could possibly be associated with blind ore deposits.

Only four water samples in the Black Hills contain >20 ppb uranium. However, three of these are associated with the Inyan Kara group, from which nearly all the uranium production in the quadrangle has occurred (Gott et al, 1974). A stream water collected upstream from the Elkhorn uranium district (Fig. 3) contains nearly 50 ppb uranium (area J, Fig. 5) and might indicate

TABLE III
URANIUM CONCENTRATIONS >20 PPB IN WATER SAMPLES
FROM THE GILLETTE QUADRANGLE, WYOMING

<u>Area</u> ^a	<u>Individual Uranium Concentration(ppb)</u>	<u>Local Background</u> ^a	<u>Local Conductivity</u> ^b	<u>Geology</u>
A	52.50	low	high	Wasatch formation
B	29.50, 27.10, 51.70, 59.00	high	high	Wasatch formation
C	41.10, 33.60, 46.20, 37.30, 115.30, 45.00, 20.40, 20.80, 34.60, 204.30, 20.30, 67.90, 96.20	inter- mediate to high	high	Wasatch formation
D	24.00, 37.50, 44.00, 21.60, 33.80, 31.60	high	high	Tongue River member, Fort Union formation
E	21.60, 212.20, 42.50	low to high	high	Tongue River member, Fort Union formation and Wasatch formation
F	29.60	high	high	Tongue River member, Fort Union formation
G	22.70	low	low	Tullock member, Fort Union formation
H	20.20	low	high	Tullock and Lebo members, Fort Union formation
I	42.80, 51.20, 32.50, 114.10, 62.20, 20.30, 34.17, 20.46, 28.90, 34.40, 20.69	inter- mediate	high	Tullock member, Fort Union formation and Lance formation
J	49.83	high	inter- mediate	Inyan Kara group or Morrison formation, Skull Creek shale, and Sundance and Gypsum Spring formations
K	34.25, 62.70	low	low	Inyan Kara group or Morrison formation
L	24.67	inter- mediate	inter- mediate	Spearfish formation

^a See Fig. 5.

^b See Plate III. High, intermediate, and low conductivities defined in text.

additional mineralization in this district. Two high-uranium ground-water samples (area K, Fig. 5) are associated with exposures of the Inyan Kara group about 10 km south of the Carlile uranium district. Water samples with high uranium concentrations in this area also exhibit low conductivities. This association was also found for water samples collected in southeastern Utah within a uranium district with high production figures (Warren et al, 1979).

The common association of samples with high uranium concentrations with areas of generally high background concentrations for water samples (Fig. 5), and the association of these areas with favorable host units, suggests that all areas with high uranium backgrounds could possibly be associated with uranium mineralization. High-density geochemical sampling of ground waters has proved highly successful for locating uranium ore bodies in the Powder River Basin (Dahl and Hagmier, 1976) and is recommended for followup exploration in these areas.

Uranium Concentrations in Sediment Samples

Sediment samples were collected from 843 locations primarily from streams, but also from springs and ponds (Fig. 6), at an average density of one per 21 km². Sediment sample density is generally about one per 12 km² in the eastern half of the quadrangle and is generally lower in the western portion.

Uranium and 42 additional elemental concentrations were measured for all sediment samples (Appendix I-B). The uranium values range from 0.64 ppm to 29.83 ppm, with a median value of 3.24 ppm (Fig. 6); thorium values range from 2.2 ppm to 35.9 ppm, with a median value of 8.6 ppm (Fig. 7).

Background uranium values in sediment (Fig. 8) exhibit an excellent correlation with geologic units; the highest values are associated with exposures of the Belle Fourche, Mowry, and Skull Creek shales of the Cretaceous Colorado group, and the lowest values with Triassic and Paleozoic limestone and gypsiferous units in the Black Hills. Relatively higher background uranium values are associated with intrusive rocks in the Black Hills. Such a high degree of correlation was not found for regions in the Colorado Plateau (Warren et al, 1979; Goff et al, 1979), which suggests that geochemical controls may differ from region to region.

Only seven sediment samples, all collected from streams, contain >8 ppm uranium. Three of these contain between 8-9 ppm uranium (Table IV) and are associated with geologic units that have only slightly lower background concentrations (Fig. 8). Consequently, these samples are probably not associated with uranium mineralization. A fourth sample (W04342) was collected in the Powder River coalfield (Breckenridge et al, 1974) and the high uranium content of this sample may be related to coal-rich rocks (Denson, 1959). A fifth sample (W04918) was collected from a stream draining the Bear Lodge Mountains alkalic pluton. This intrusion is associated with veins, fractures, and lenses containing rare earth element (REE), thorium, uranium, and manganese mineralization (Table II). The association of these elements in sample W04918 (Table IV) strongly suggests the presence of such mineralization in this drainage. The remaining two samples, which exhibit both exceptionally high uranium contents (25-30 ppm) and uranium-to-thorium (U/Th) ratios (3-4), were collected downstream from uranium mining operations in the Hulett Creek district (Fig. 3).

The most promising areas for the presence of uranium mineralization in the quadrangle, as defined by the uranium contents of sediment samples only, are not associated with markedly high uranium contents. These areas are

a. All sediments *

* The 23 natural pond sediments are included in this histogram only.

b. Dry stream sediments

c. Wet stream sediments

Fig. 6. Histograms and statistical data for uranium concentrations in sediment samples from the Gillette quadrangle, Wyoming.

d. Wet artificial pond sediments

e. Wet spring sediments

f. Dry spring sediments

g. Dry artificial pond sediments

Fig. 6. (Continued)

a. All sediments *

* The 23 natural pond sediments are included in this histogram only.

b. Dry stream sediments

c. Wet stream sediments

Fig. 7. Histograms and statistical data for thorium concentrations in sediment samples from the Gillette quadrangle, Wyoming.

d. Wet artificial pond sediments

e. Wet spring sediments

f. Dry spring sediments

g. Dry artificial pond sediments

Fig. 7. (Continued)

Fig. 8. Background uranium concentrations and location of samples containing >8 ppm in sediment samples from the Gillette quadrangle, Wyoming.

associated with uranium concentrations that are only slightly enriched above the general background values in the western part of the quadrangle (Fig. 8) for both the Wasatch formation (4-8 ppm vs 3-5 ppm) and the Fort Union formation (3-5 vs 2-4 ppm). Planner and Campbell (1980) showed that for sediment samples, the geochemical signature of individual districts in the Grants Mineral Belt, New Mexico, is very subtle and results in only a slight, but distinct, increase of uranium contents above local background. The

TABLE IV
URANIUM CONCENTRATIONS >8 PPM IN SEDIMENT SAMPLES
FROM THE GILLETTE QUADRANGLE, WYOMING

<u>Sample Number</u>	<u>Uranium (ppm)</u>	<u>U/Th</u>	<u>Associated Elements^a</u>	<u>Geology</u>
W04342	10.10	0.571		Wasatch formation
W04805	8.17	1.021		Belle Fourche shale
W04910	25.85	3.152	Co, Mn	Faulted area where Inyan Kara group, Skull Creek shale, and Newcastle sandstone exposed
W04914	29.83	3.683		
W04918	11.09	0.309	Ba, Mn, Th, REE ^b	Mid-Tertiary clastic rocks, Eocene intrusive rocks
W04993	8.61	0.736		Belle Fourche shale
W05261	8.13	0.677	Fe, Mn	Newcastle sandstone, Mowry shale

a Elements additional to uranium that have notably high concentrations.

b Rare earth elements.

Maybell district in northwestern Colorado exhibits a similar geochemical signature (Planner, 1980, personal communication), and therefore such a geochemical signature may be common for epigenetic sandstone uranium deposits in the Colorado Plateau. Both the Grants Mineral Belt and Maybell district are certainly not associated with distinctly high uranium concentrations in sediment samples (Maassen et al, 1979; Bolivar et al, 1979).

Therefore, the three areas associated with the Wasatch formation and the area associated with the Fort Union formation where uranium values are slightly, but distinctly, above background (Fig. 8) are areas where uranium mineralization might exist. The area associated with the Fort Union formation appears as a westward extension of the higher background values marginal to the Black Hills; however, these values are probably not related to units exposed within the Black Hills because stream drainage is eastward in this area. Water samples from each of these four areas also generally have higher uranium concentrations (Fig. 5). It is possible that the slightly higher uranium concentrations of the sediment samples could be physically related to the high uranium concentrations in the water samples by adsorption of uranium from the water by clays, organic matter, or iron oxides.

VII. SUMMARY AND CONCLUSIONS

Totals of 752 water and 843 sediment samples were collected from 1419 locations throughout the 17 700-km² area of the Gillette quadrangle. Water

samples were collected primarily from ground-water sources and sediment samples primarily from streams. Samples from the western half of the quadrangle were collected during 1976; those from the eastern half were collected during 1977. All water samples were analyzed for uranium (Appendix I-A) and all sediment samples were analyzed for uranium and 42 additional elements (Appendix I-B).

Uranium concentrations in water samples range from below the detection limit of 0.02 ppb to 212.20 ppb, with a median value of 1.10 ppb. Several areas within the quadrangle have water samples with high background uranium concentrations (>5 ppb); generally, several samples within such areas contain >20 ppb uranium. These regions are all associated with favorable host units for uranium mineralization: the Wasatch and Fort Union formations in the Powder River Basin and the Inyan Kara group in the Black Hills uplift.

Uranium concentrations in sediment samples range from 0.64 ppm to 29.83 ppm, with a median value of 3.24 ppm. Background uranium values are strongly controlled by the exposed geologic unit and are highest (4-8 ppm) where Cretaceous Colorado group shale units crop out and lowest (1-3 ppm) where Triassic and Paleozoic units, primarily carbonate and gypsiferous rocks, are exposed. There are several areas where uranium concentrations rise slightly, but distinctly, above these background levels; these areas are associated with exposures of the Wasatch and Fort Union formations. Planner and Campbell (1980) present evidence that uranium districts in the Grants Mineral Belt are associated with such a geochemical signature; therefore, these subtle elevations in uranium values may be an indication of uranium mineralization. High uranium concentrations are also found for ground-water samples in all such areas within the Gillette quadrangle. The association of high uranium concentrations in both water and sediment samples suggests that the uranium concentrations slightly above background for the sediment samples might have been derived from water by various adsorbing species present within the sediment.

In summary, several geochemically favorable areas for uranium mineralization are defined within the Wasatch, Fort Union, and Inyan Kara formations in the Gillette quadrangle. These areas are defined both by the presence of high uranium contents in water samples and by slightly higher uranium contents in sediment samples compared to local backgrounds. The measurement of uranium concentrations in water samples has already proved highly successful as an aid in locating uranium districts in the Powder River Basin (Dahl and Hagmier, 1976), but it should be emphasized that use of uranium values for sediment samples might be of equal utility. However, definition of the subtle elevations in sediment uranium values associated with known uranium districts (Planner and Campbell, 1980) requires extremely precise uranium measurements for a large number of samples.

The favorable areas defined in this report should be further investigated employing a higher density sampling for both water and sediment. Sediment sampling might be particularly useful in areas where water samples are unavailable. Water sampling should not be limited to ground waters alone due both to the possibility of good integration of ground and surface waters and the widespread availability of surface water following storms. Even large short-period variations in water flow rate due to storms probably do not have a large effect on water chemistry (Miller and Drever, 1977).

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APPENDIX I

LISTINGS OF FIELD DATA AND ELEMENTAL CONCENTRATIONS FOR SAMPLES
FROM THE GILLETTE NTMS QUADRANGLE, WYOMING

APPENDIX I-A

Listing of Field Data and Uranium Concentrations
for Water Samples from the Gillette Quadrangle, Wyoming
(Pages 26 through 40)

(See Appendix II for Code to Listings)

APPENDIX I-A. Uranium Concentrations for Water Samples

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)	SCINTILLATOR (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 (N)	UNITS IN PPB
							DATE	HOUR																											
56-44.2319	-105.2041	-2-08-	0-040001	-03/27/76-12-	11-	9.0-C-	6.9-	2200-	8-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62.20*		
56-44.3048	-105.2133	-2-08-	0-040002	-03/27/76-13-	11-	8.0-C-	6.6-	3000-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.55		
56-44.3108	-105.2322	-2-10-	0-040003	-03/27/76-14-	9-	9.0-C-	5.2-	90-	6-1-7-5-6-1-3-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.61		
56-44.3216	-105.2044	-2-08-	0-040004	-03/27/76-14-	10-	8.0-C-	6.6-	2800-	7-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.04		
56-44.3480	-105.1438	-2-08-	0-040006	-03/27/76-16-	12-	9.0-C-	6.6-	1700-	12-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16		
56-44.3158	-105.1450	-2-09-	0-040007	-03/27/76-16-	9-14.0-	6.3-	900-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.68		
56-44.3422	-105.1861	-2-09-	0-040008	-03/28/76-	9-	4-1.0-C-	6.0-	500-	6-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.03		
56-44.3630	-105.1980	-2-08-	0-040009	-03/28/76-	9-	5-10.0-	6.6-	1900-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54		
56-44.3827	-105.1947	-2-08-	0-040010	-03/28/76-10-	5-	6.0-	6.6-	2900-	9-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.71		
56-44.3986	-105.2283	-2-08-	0-040011	-03/28/76-11-	9-	7.0-	6.6-	2400-	6-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10		
56-44.4102	-105.2386	-2-08-	0-040012	-03/28/76-11-	5-11.0-	6.6-	1500-	9-1-5-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.32		
56-44.4405	-105.2261	-2-10-	0-040014	-03/28/76-12-	5-11.0-C-	6.6-	3000-	9-1-7-4-7-1-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.29		
56-44.2925	-105.0997	-2-08-	0-040015	-03/28/76-14-	4-	7.0-	6.6-	3000-	12-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32.50*		
56-44.3038	-105.0952	-2-10-	0-040016	-03/28/76-14-	5-	7.0-C-	7.2-	1600-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.30*		
56-44.3458	-105.1122	-2-10-	0-040017	-03/28/76-14-	5-	9.0-	5.2-	1800-	6-1-5-4-6-1-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10		
56-44.3911	-105.1022	-2-10-	0-040018	-03/28/76-15-	5-	9.0-	6.3-	1300-	6-1-6-4-6-1-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.09		
56-44.4325	-105.0886	-2-08-	0-040019	-03/28/76-16-	5-	6.0-	6.3-	300-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10		
56-44.4469	-105.0769	-2-08-	0-040020	-03/28/76-16-	5-	9.0-C-	9.0-	4300-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.44		
56-44.4591	-105.0566	-2-08-	0-040021	-03/28/76-14-	5-	6.0-C-	6.6-	600-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.33		
56-44.4800	-105.0219	-2-08-	0-040022	-03/28/76-17-	5-	5.0-C-	5.2-	110-	16-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.32		
56-44.3355	-105.0516	-2-08-	0-040024	-03/28/76-	9-	5-6.0-	6.3-	3400-	12-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.17		
56-44.3555	-105.0591	-2-08-	0-040025	-03/28/76-	9-	5-5.0-C-	6.3-	2500-	6-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19.60*		
56-44.3466	-105.0447	-2-07-	0-040026	-03/28/76-10-	5-	6.0-	6.6-	4200-	9-1-7-4-7-2-2-2-3-4-2-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.70*		
56-44.3894	-105.0561	-2-10-	0-040027	-03/28/76-11-	5-	6.0-	5.2-	800-	12-1-6-4-6-1-3-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.68		
56-44.3847	-105.0211	-2-08-	0-040028	-03/28/76-12-	5-	5.0-C-	7.2-	1900-	6-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.82		
56-44.3891	-105.0061	-2-10-	0-040029	-03/28/76-12-	5-	5.0-	5.7-	120-	9-1-6-4-6-1-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47		
56-44.3986	-105.0105	-2-10-	0-040030	-03/28/76-13-	5-	6.0-	6.6-	2500-	16-1-6-4-6-1-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28.90*		
56-44.4369	-105.0088	-2-10-	0-040031	-03/28/76-14-	5-	6.0-	5.5-	360-	12-1-6-4-6-1-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.92		
56-44.4186	-105.0450	-2-10-	0-040032	-03/28/76-14-	6-	6.0-	6.6-	2000-	19-1-6-4-6-1-3-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34.40*		
56-44.3052	-105.0300	-2-08-	0-040033	-03/28/76-14-	5-	6.0-	6.6-	4900-	19-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	114.10*		
56-44.3497	-105.0111	-2-08-	0-040034	-03/28/76-14-	5-	6.0-	6.9-	1400-	9-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.42		
56-44.3141	-105.0088	-2-08-	0-040035	-03/28/76-14-	5-	6.0-	6.9-	1600-	9-1-5-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.21		
56-44.2744	-105.0741	-2-08-	0-040037	-03/30/76-	7-	8.0-	6.6-	1300-	9-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.40		
56-44.2491	-105.0716	-2-08-	0-040038	-03/30/76-	7-	9.0-	6.6-	1400-	9-1-5-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51.20*		
56-44.2305	-105.0455	-2-08-	0-040040	-03/30/76-10-	7-	4.0-C-	6.6-	3600-	12-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.63		
56-44.2344	-105.0105	-2-08-	0-040041	-03/30/76-10-	7-	6.0-	6.6-	2100-	11-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.22		
56-44.2300	-105.1194	-2-09-	0-040042	-03/30/76-12-	7-	7.0-	5.5-	130-	9-1-5-4-5-1-2-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10		
56-44.1994	-105.0888	-2-08-	0-040043	-03/30/76-13-	7-	7.0-	6.3-	4000-	16-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42.80*		
56-44.1916	-105.0855	-2-08-	0-040044	-03/30/76-13-	7-	8.0-C-	6.6-	2300-	8-1-5-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.93		
56-44.2444	-105.2125	-2-08-	0-040045	-03/30/76-12-	9-	9.0-	6.3-	330-	16-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.86		
56-44.2222	-105.2136	-2-09-	0-040046	-03/30/76-13-	9-	8.0-	5.5-	70-	9-1-7-4-7-1-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10		
56-44.7405	-105.7083	-2-08-	0-040047	-03/31/76-10-	13-	7.0-C-	6.6-	900-	9-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10		
56-44.7280	-105.7016	-2-09-	0-040048	-03/31/76-10-	13-	9.0-	6.9-	1800-	6-1-5-4-6-1-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.46		
56-44.7250	-105.6869	-2-08-	0-040049	-03/31/76-11-	15-12.0-C-	6.6-	4800-	9-1-5-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-</						

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

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 (µmho/cm)	SCINTILLATOR (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)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (H) UNITS IN PPB
							DATE	HOUR																										
56-44.3216-105.3252-2-06	0-004057-03/28/76-12	4-4.0-C	7.2	490	9-1-7-	-2-	-1-	-4-3-3-3-	-1-	-	-	-	-	1.63																				
56-44.3319-105.3213-2-08	0-004058-03/28/76-13	4-13.5-C	5.7	300	10-1-7-	-	-	-4-2-2-3-	-1-3-	-	-	-	-	0.70																				
56-44.3536-105.3091-2-06	0-004059-03/28/76-13	3-9.0-C	5.5	200	15-1-5-	-	-	-4-2-4-2-	-1-	-	-	-	-	0.65																				
56-44.3669-105.3494-2-10	0-004060-03/28/76-14	3-7.0-C	5.2	500	10-1-7-5-4-2-3-2-	-	-	-4-3-3-2-	-1-	-	-	-	-	0.97																				
56-44.4208-105.2547-2-08	0-004061-03/28/76-	1-9.0-C	6.2	2000	7-1-7-	-	-	-4-2-2-2-	-1-3-	6-200-	-	-	-	6.16																				
56-44.4411-105.2966-2-10	0-004062-03/28/76-17	3-6.0-C	5.2	140	7-1-7-5-6-2-3-6-	-	-	-4-3-3-2-	-1-	-	-	-	-	0.35																				
56-44.5544-105.6666-2-08	0-004064-03/30/76-10	7-9.0-C	6.6	760	15-1-7-	-	-	-4-2-2-1-	-1-3-	6-	-	-	-	0.10																				
56-44.2736-105.6522-2-08	0-004065-04/05/76-8	12-9.0-C	6.3	1200	10-1-6-	-	-3-3-1-	-4-3-2-1-	-1-1-	-	-	-	-	0.52																				
56-44.2700-105.6327-2-08	0-004066-04/05/76-8	12-10.0-C	6.8	1900	6-1-6-	-	-3-3-1-	-4-3-2-1-	-1-8-	-	-	-	-	0.28																				
56-44.2738-105.6291-2-08	0-004067-04/05/76-8	12-11.0-C	6.3	4900	10-1-7-	-	-3-3-1-	-4-3-2-1-	-1-1-	-	-	-	-	0.66																				
56-44.2819-105.6800-2-09	0-004068-04/05/76-9	12-10.0-C	6.1	1200	8-1-7-4-7-1-2-1-	-	-	-4-3-2-1-	-1-	-	-	-	-	18.10*																				
56-44.2763-105.7069-2-08	0-004069-04/05/76-10	13-10.0-C	6.8	700	13-1-6-	-	-3-3-1-	-4-3-2-1-	-1-1-	-	-	-	-	0.10																				
56-44.2733-105.6927-2-09	0-004070-04/05/76-10	13-10.0-C	6.5	1900	10-1-6-4-6-1-2-1-	-	-	-4-3-2-1-	-1-	-	-	-	-	5.92																				
56-44.2944-105.7263-2-06	0-004071-04/05/76-11	13-9.0-C	5.9	1300	8-1-6-4-8-1-2-1-	-	-	-4-3-2-1-	-1-	-	-	-	-	11.50																				
56-44.2847-105.7119-2-09	0-004072-04/05/76-11	13-10.0-C	6.8	10000	13-1-6-4-5-1-2-1-	-	-	-4-3-2-1-	-1-	-	-	-	-	204.30*																				
56-44.2686-105.7436-2-08	0-004073-04/05/76-12	12-10.0-C	6.3	1500	10-1-6-	-	-3-3-1-	-4-3-2-1-	-1-1-	-	-	-	-	2.36																				
56-44.2936-105.7597-2-08	0-004074-04/05/76-12	13-12.0-C	6.8	900	16-1-7-	-	-3-3-1-	-4-3-2-1-	-1-1-	-	-	-	-	0.10																				
56-44.6355-105.3452-2-08	0-004075-03/29/76-10	6-7.0-C	8.2	1300	12-1-7-	-	-2-3-1-	-4-2-2-1-	-1-1-	-	-	-	-	0.10																				
56-44.6372-105.3350-2-08	0-004076-03/29/76-10	11-11.0-C	8.6	1200	9-1-7-	-	-	-4-2-1-1-	-1-8-	6-200-	-	-	-	0.10																				
56-44.6480-105.3069-2-06	0-004077-03/29/76-10	4-10.0-C	8.4	1600	32-1-7-	-	-3-3-1-	-4-3-2-1-	-1-	-	-	-	-	0.54																				
56-44.6622-105.2619-2-08	0-004078-03/29/76-11	9-14.0-C	8.5	1300	12-1-7-	-	-3-3-1-	-4-3-2-1-	-1-9-	-	-	-	-	0.10																				
56-44.6436-105.2612-2-08	0-004079-03/29/76-12	12-12.0-C	8.6	1600	15-1-7-	-	-3-3-1-	-4-3-2-2-	-1-9-	-	-	-	-																					

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

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)	SCINTILLATOR (ml)	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 86 UNITS IN PPB
							DATE	HOUR																										
56-44.8566-105.3655-2-0F	0-W04120-03/31/76-12	17-15.0-	-	7.2-	110-	11-1-7-	-	-3-3-1-	-4-2-1-1-	-1-3-	6-250-	-	0.28																					
56-44.8405-105.3655-2-10	0-W04121-03/31/76-13	20-14.0-C	-	6.3-	800-	9-1-7-4-7-1-2-3-	-	-4-3-1-1-	-1-	-	-	-	0.37																					
56-44.8405-105.3402-2-0R	0-W04122-03/31/76-13	12-11.0-C	-	6.6-	2100-	12-1-7-	-	-2-2-1-	-4-2-2-1-	-1-9-	-	-	0.96																					
56-44.8361-105.2991-2-0R	0-W04123-03/31/76-13	18-13.0-C	-	6.6-	1150-	12-1-7-	-	-2-3-1-	-4-2-2-1-	-1-9-	-	-	0.54																					
56-44.8236-105.2809-2-10	0-W04124-03/31/76-13	14-16.0-	-	6.0-	1700-	9-1-7-5-5-1-2-2-	-	-4-2-3-1-	-1-	-	-	-	0.10																					
56-44.7350-105.7075-2-0R	0-W04125-03/31/76-11	15-10.0-C	-	6.9-	1700-	9-1-6-	-	-1-3-1-	-4-4-2-1-	-1-1-	-	-	0.10																					
56-44.7283-105.7072-2-0R	0-W04126-03/31/76-12	15-10.0-C	-	6.3-	700-	12-1-6-	-	-2-3-1-	-4-4-2-1-	-1-1-48-	15-	-	0.10																					
56-44.7333-105.7083-2-0R	0-W04127-03/31/76-12	20-10.0-	-	6.3-	1500-	12-1-6-	-	-3-3-1-	-4-4-2-1-	-3-3-	-	-	2.51																					
56-44.7336-105.7091-2-0R	0-W04128-03/31/76-13	20-5.0-	-	6.9-	1500-	12-1-6-	-	-3-3-1-	-4-4-2-1-	-1-8-	4-250-	-	0.10																					
56-44.7144-105.6872-2-0R	0-W04129-03/31/76-14	22-9.0-	-	6.6-	1400-	12-1-6-	-	-3-3-1-	-4-3-2-1-	-3-8-	6-300-	-	1.67																					
56-44.7250-105.7075-2-0R	0-W04130-03/31/76-14	22-10.0-	-	6.6-	1500-	22-1-6-	-	-2-3-1-	-4-2-2-1-	-3-8-	6-200-	-	0.77																					
56-44.7016-105.6836-2-0R	0-W04131-03/31/76-14	22-13.0-	-	6.6-	2400-	9-1-6-	-	-3-3-1-	-4-2-2-1-	-1-8-	8-180-	-	0.98																					
56-44.6997-105.6744-2-0R	0-W04132-03/31/76-14	22-14.0-C	-	6.6-	3400-	9-1-6-	-	-1-3-2-	-7-4-2-1-	-3-4-	6-260-	-	2.74																					
56-44.7022-105.6628-2-0R	0-W04133-03/31/76-14	16-11.0-	-	6.6-	1000-	9-1-6-	-	-3-3-1-	-4-2-3-1-	-1-8-	4-105-	-	7.14																					
56-44.6980-105.6955-2-0R	0-W04134-03/31/76-14	15-10.0-	-	6.3-	900-	12-1-6-	-	-3-3-1-	-4-3-2-1-	-1-8-	6-90-	-	1.77																					
56-44.6811-105.7116-2-0R	0-W04135-03/31/76-15	14-19.0-C	-	6.9-	1100-	12-1-6-	-	-1-3-1-	-4-3-2-1-	-1-4-	5-443-	-	0.10																					
56-44.6747-105.6888-2-0R	0-W04136-03/31/76-17	15-10.0-	-	6.3-	2600-	9-1-6-4-6-1-3-2-	-	-4-3-3-1-	-1-	-	-	-	5.36																					
56-44.7650-105.6944-2-0R	0-W04138-04/01/76-9	18-9.0-	-	6.6-	1000-	9-1-6-	-	-3-3-1-	-4-3-3-1-	-1-8-	6-133-	-	0.28																					
56-44.7983-105.6922-2-0R	0-W04139-04/01/76-10	15-8.0-	-	6.6-	600-	9-1-6-	-	-2-3-1-	-6-2-3-1-	-1-	-	-	2.16																					
56-44.7855-105.6961-2-10	0-W04140-04/01/76-10	15-13.0-	-	6.6-	250-	15-1-6-4-6-1-3-2-	-	-4-2-4-1-	-1-	-	-	-	1.14																					
56-44.7994-105.7255-2-0R	0-W04141-04/01/76-11	14-12.0-C	-	6.6-	500-	12-1-6-	-	-1-2-3-	-4-2-4-1-	-1-1-	-	-	0.51																					
56-44.8327-105.7111-2-0R	0-W04142-04/01/76-11	15-11.0-	-	6.3-	2700-	9-1-6-	-	-2-2-1-	-4-2-4-1-	-1-3-	-	-	5.04																					
56-44.8519-105.7283-2-0R	0-W04143-04/01/76-1																																	

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

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)	SCINTILLAMETER (100 ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RIPEL	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (46) UNITS IN PPB
							DATE	HOUR																										
56-44.6713-105.7194-2-08-	0-W06192-04/03/76-12-	15-10.0-	-	6.6-	3500-	8-1-6-	-	-3-3-1-	-4-3-1-1-	-1-1-	6-130-	-	5.73																					
56-44.8072-105.6638-2-08-	0-W06193-04/03/76-13-	15-13.0-	-	6.6-	1800-	12-1-6-	-	-3-3-1-	-4-3-2-1-	-1-4-	-	-	0.91																					
56-44.8098-105.6733-2-08-	0-W06194-04/03/76-13-	15-10.0-	-	6.8-	2800-	12-1-6-	-	-3-3-1-	-4-3-2-1-	-1-3-	-	-	4.58																					
56-44.8347-105.6333-2-10-	0-W06195-04/03/76-14-	10-12.0-	-	6.1-	490-	9-1-6-4-6-1-	2-2-1-	-4-2-3-1-	-1-	-	-	-	2.69																					
56-44.8338-105.6891-2-08-	0-W06197-04/03/76-15-	12-10.0-	-	6.8-	4100-	12-1-7-	-	-3-3-1-	-4-3-2-1-	-1-3-	-	-	1.44																					
56-44.6098-105.6744-2-08-	0-W06198-04/03/76-16-	14-11.0-	-	6.8-	3200-	6-1-6-	-	-3-3-1-	-4-3-2-1-	-1-3-	6-275-	-	0.51																					
56-44.6077-105.6713-2-08-	0-W06189-04/03/76-16-	14-11.0-	-	6.8-	3500-	6-1-6-	-	-3-3-1-	-4-3-2-1-	-1-3-	6-440-	-	2.40																					
56-44.5997-105.6450-2-08-	0-W06190-04/03/76-16-	14-10.0-	-	6.3-	1400-	19-1-6-	-	-3-3-1-	-4-3-2-1-	-1-1-	-	-	3.12																					
56-44.5808-105.6696-2-08-	0-W06191-04/03/76-17-	15-12.0-	-	6.8-	1700-	16-1-6-	-	-1-2-2-	-4-2-2-1-	-1-1-	-	-	0.24																					
56-44.5108-105.6416-2-08-	0-W06192-04/04/76-9-	14-8.0-	-	6.8-	1500-	9-1-6-	-	-1-2-1-	-4-3-2-1-	-1-1-	-	-	0.10																					
56-44.5183-105.6641-2-10-	0-W06193-04/04/76-9-	12-8.0-	-	6.8-	1600-	17-1-7-4-7-1-	2-2-1-	-4-3-2-1-	-3-	-	-	-	1.43																					
56-44.7413-105.6108-2-08-	0-W06194-04/03/76-12-	9-15.0-	-	6.6-	360-	12-1-7-	-	-2-2-1-	-4-2-2-1-	-1-1-	-	-	31.60*																					
56-44.7294-105.5733-2-08-	0-W06195-04/03/76-12-	13-10.0-	-	7.2-	1000-	13-1-7-	-	-2-2-1-	-4-2-2-1-	-1-1-	-	-	0.10																					
56-44.9016-105.5397-2-08-	0-W06199-04/03/76-14-	11-14.0-	-	6.6-	2800-	12-1-7-	-	-3-3-1-	-4-2-2-1-	-1-3-	6-300-	-	1.67																					
56-44.9247-105.5027-2-08-	0-W06201-04/03/76-15-	12-12.0-	-	6.4-	2700-	15-1-7-	-	-3-3-1-	-4-2-2-1-	-1-1-	-	-	0.36																					
56-44.9100-105.5739-2-08-	0-W06203-04/03/76-15-	14-11.0-	-	7.5-	30000-	13-1-7-	-	-1-2-2-	-4-2-2-1-	-1-1-	-	-	18.30*																					
56-44.9211-105.5938-2-08-	0-W06204-04/03/76-15-	12-11.0-	-	6.6-	3200-	15-1-7-	-	-3-3-1-	-4-2-2-1-	-1-1-	-	-	0.18																					
56-44.9413-105.6127-2-08-	0-W06206-04/03/76-16-	13-13.0-	-	6.6-	3500-	12-1-7-	-	-3-3-1-	-4-2-2-1-	-1-8-	-	-	7.60																					
56-44.9916-105.5911-2-10-	0-W06208-04/03/76-16-	14-11.0-	-	6.3-	200-	9-1-7-	-	-1-3-2-	-4-2-2-1-	-1-	-	-	0.10																					
56-44.9461-105.4922-2-10-	0-W06211-04/06/76-9-	14-10.0-	-	6.0-	1200-	6-1-6-	-	-1-2-4-	-4-2-2-2-	-1-	-	-	0.24																					
56-44.9977-105.5093-2-08-	0-W06213-04/06/76-9-	14-10.0-	-	6.9-	49000-	3-1-6-	-	-2-3-1-	-1-2-3-2-	-1-1-	-	-	18.20*																					
56-44.5427-105.6713-2-10-	0-W06216-04/06/76-11-	16-10.0-	-	6.6-	1500-	16-1-6-4-6-1-	1-2-1-	-4-3-2-1-	-1-	-	-	-	1.86																					
56-44.5372-105.7208-2-10-	0-W06217-04/06/76-11-	19-13.0-	-	6.3																														

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

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)	SCINTILLATOR (4-1 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																										
56-44.1991-105.6322-2-08						0-404249-04/03/76-14	11-09-00		9.0-C				6.0	3500	12-1-6																			7.60
56-44.2055-105.6536-2-10						0-404249-04/03/76-14	13-09-00		9.0-C				6.3	800	12-1-6-4-5																			1.26
56-44.2347-105.7338-2-08						0-404250-04/03/76-15	15-10-00						7.2	2200	16-1-6																			4.41
56-44.2222-105.7369-2-10						0-404251-04/03/76-16	10-14-00		9.0-C				6.6	1200	15-1-6-4-6																			20.30*
56-44.2075-105.6913-2-08						0-404252-04/04/76-9	10-07-00		7.0-C				6.9	2300	9-1-6																			4.85
56-44.2097-105.6997-2-07						0-404253-04/04/76-9	11-05-00		5.0-C				6.6	10000	9-1-6																			67.90*
56-44.2116-105.7152-2-08						0-404254-04/04/76-9	15-09-00		9.0-C				6.9	1200	9-1-6																			0.65
56-44.2172-105.7230-2-07						0-404255-04/04/76-10	12-09-00		9.0-C				6.6	900	6-1-6																			1.95
56-44.2444-105.7125-2-08						0-404256-04/04/76-10	11-12-00		7.0-C				6.9	2000	12-1-6																			2.43
56-44.2463-105.7030-2-08						0-404257-04/04/76-10	10-11-00		7.0-C				6.9	2900	12-1-6																			1.08
56-44.2344-105.6544-2-08						0-404258-04/04/76-10	16-11-00		7.0-C				6.9	2300	6-1-6																			1.10
56-44.2308-105.6447-2-08						0-404259-04/04/76-11	14-11-00		7.0-C				7.2	1700	12-1-6																			0.63
56-44.2383-105.7147-2-08						0-404259-04/04/76-11	14-11-00		7.0-C				7.8	1100	18-1-6																			0.10
56-44.2005-105.6922-2-10						0-404261-04/04/76-12	14-09-00		9.0-C				6.3	200	9-1-6																			0.53
56-44.1988-105.6909-2-08						0-404262-04/04/76-12	14-10-00		7.0-C				6.6	3400	12-1-6																			3.19
56-44.1850-105.6716-2-08						0-404263-04/04/76-12	13-12-00		7.0-C				6.9	2600	6-1-6																			0.10
56-44.1805-105.6650-2-10						0-404264-04/04/76-12	19-13-00		7.0-C				6.0	140	9-1-6																			0.10
56-44.1822-105.6500-2-08						0-404265-04/04/76-13	15-11-00		7.0-C				6.0	1800	12-1-6																			1.49
56-44.1905-105.6469-2-10						0-404266-04/04/76-13	17-12-00		7.0-C				6.9	900	15-1-6																			18.70*
56-44.1744-105.6455-2-10						0-404267-04/04/76-13	19-12-00		7.0-C				6.0	900	12-1-6																			0.35
56-44.1683-105.6475-2-08						0-404268-04/04/76-14	24-14-00		7.0-C				6.9	1100	26-1-6																			0.10
56-44.1263-105.7166-2-08						0-404269-04/04/76-15	20-08-00		7.0-C				6.6	2000	12-1-6																			0.95
56-44.1247-105.7188-2-10						0-404270-04/04/76-15	20-14-00		7.0-C				6.6	300	9-1-6																			0.56
56-44.1233-105.7102-2-08						0-404271-04/04/76-15	20-13-00		7.0-C				6.9	1400	12-1-6																			0.40
56-44.1100-105.7094-2-08						0-404272-04/04/76-15	16-07-00		7.0-C				6.6	2100	9-1-6																			1.14
56-44.1011-105.7091-2-08						0-404273-04/04/76-16	15-11-00		7.0-C				6.6	1900	9-1-6																			4.80
56-44.0808-105.7325-2-08						0-404274-04/05/76-12	14-09-00		7.0-C				6.8	2100	10-1-6																			0.24
56-44.0783-105.7266-2-08						0-404275-04/05/76-12	14-14-00		7.0-C				6.0	1200	9-1-6																			1.74
56-44.0777-105.7227-2-08						0-404276-04/05/76-13	14-09-00		7.0-C				5.9	1500	12-1-6																			0.79
56-44.0180-105.7055-2-08						0-404277-04/05/76-13	10-16-00		7.0-C				6.3	800	34-1-6																			0.10
56-44.0183-105.6352-2-08						0-404278-04/05/76-14	18-15-00		7.0-C				6.0	1450	12-1-6																			0.16
56-44.9894-105.4586-2-08						0-404279-04/06/76-10	10-10-00		7.0-C				6.6	31000	12-1-6																			9.30*
56-44.9877-105.4386-2-08						0-404280-04/06/76-10	20-10-00		7.0-C				6.6	4200	12-1-6																			0.53
56-44.9669-105.4069-2-08						0-404282-04/06/76-11	17-11-00		7.0-C				6.9	31000	9-1-6																			7.42
56-44.9827-105.3661-2-08						0-404284-04/06/76-11	22-16-00		7.0-C				6.9	1100	9-1-6																			0.77
56-44.9847-105.3277-2-08						0-404286-04/06/76-11	22-13-00		7.0-C				6.9	1000	9-1-6																			0.20*
56-44.9780-105.3144-2-08						0-404287-04/06/76-12	22-14-00		7.0-C				6.9	1000	6-1-6																			0.45
56-44.9747-105.2944-2-08						0-404288-04/06/76-12	22-13-00		7.0-C				6.6	1100	6-1-7																			0.63
56-44.9586-105.2669-2-08						0-404289-04/06/76-12	20-13-00		7.0-C				6.6	1350	9-1-7																			0.90
56-44.9266-105.3561-2-08						0-404290-04/06/76-12	19-19-00		7.0-C				6.9	1000	15-1-7																			0.10
56-44.8838-105.3488-2-08						0-404291-04/06/76-13	23-13-00		7.0-C				6.9	1100	12-1-7																			0.10
56-44.8902-105.3644-2-08						0-404292-04/06/76-14	19-13-00		7.0-C				6.9	1200	12-1-7																			0.22
56-44.9122-105.3219-2-08						0-404294-04/06/76-14	19-15-00		7.0-C				6.9	1000	9-1-7																			0.22
56-44.9105-105.2658-2-08						0-404295-04/06/76-15	19-15-00		7.0-C				6.6	1000	6-1-7																			0.58
56-44.9538-105.3694-2-08						0-404296-04/06/76-15	14-15-00		7.0-C				7.2	1000	9-1-7																			0.10
56-44.7722-105.8127-2-08						0-404299-04/05/76-9	12-06-00		7.0-C				6.6	800	16-1-6																			0.10
56-44.7800-105.8233-2-07						0-404300-04/05/76-9	12-09-00		7.0-C				6.3	2300	9-1-6-4-6																			21.60*
56-44.8038-105.8544-2-08						0-404301-04/05/76-9	14-10-00		7.0-C				6.6	2500	16-1-6																			0.58
56-44.7702-105.8147-2-10						0-404303-04/05/76-9	14-10-00		7.0-C				5.7	310	6-1-6-4-6																		0.69	
56-44.7255-105.7772-2-08																																		

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

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)	SCINTILLATOR (µCi/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)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (N) UNITS IN PPB
							DATE	HOUR																										
56-44.7361	-105.7647	-2-08-	0-404306	-04/05/76-12-	17-8.0-	-	6.3-	800-	9-1-6-	-	-2-3-1-	-4-2-3-1-	-1-1-	6-	30-	-	5.98																	
56-44.7116	-105.7930	-2-08-	0-404307	-04/05/76-12-	21-10.0-	-	6.9-	2000-	16-1-6-	-	-3-3-1-	-4-2-3-1-	-3-2-	-	-	-	2.40																	
56-44.7116	-105.8061	-2-08-	0-404308	-04/05/76-13-	21-12.0-	-	6.6-	2600-	9-1-7-	-	-1-2-2-	-4-3-2-1-	-3-1-	-	-	-	3.24																	
56-44.7372	-105.8094	-2-08-	0-404309	-04/05/76-13-	22-11.0-	-	6.6-	1900-	9-1-6-	-	-2-3-1-	-4-3-2-1-	-3-1-	-	-	-	5.70																	
56-44.7319	-105.8341	-2-08-	0-404310	-04/05/76-13-	22-12.0-	-	8.0-	1200-	12-1-7-	-	-3-3-1-	-3-2-3-1-	-9-3-	-	-	-	0.54																	
56-44.7158	-105.8277	-2-08-	0-404311	-04/05/76-13-	22-10.0-	-	6.9-	1200-	9-1-6-	-	-3-3-1-	-4-2-2-1-	-3-3-	-	-	-	0.10																	
56-44.7075	-105.7755	-2-08-	0-404312	-04/05/76-13-	22-9.0-	-	6.6-	3000-	9-1-6-	-	-1-3-1-	-4-3-3-1-	-1-1-	-	-	-	2.52																	
56-44.6833	-105.8547	-2-08-	0-404313	-04/06/76-9-	18-12.0-	-	8.5-	2900-	9-1-6-	-	-3-3-1-	-4-3-2-1-	-1-3-	-	-	-	2.16																	
56-44.6736	-105.8472	-2-08-	0-404314	-04/06/76-9-	18-9.0-	-	6.6-	5000-	16-1-4-	-	-2-3-1-	-4-2-3-2-	-1-1-	-	-	-	6.29																	
56-44.6711	-105.8505	-2-09-	0-404315	-04/06/76-9-	18-12.0-	-	6.3-	350-	16-1-4-4-6-	-	-1-2-3-	-4-2-3-3-	-1-	-	-	-	1.51																	
56-44.6544	-105.8472	-2-08-	0-404316	-04/06/76-10-	17-9.0-	-	6.6-	1600-	9-1-6-	-	-1-2-1-	-4-2-3-3-	-1-1-	-	-	-	0.77																	
56-44.6827	-105.8663	-2-08-	0-404317	-04/06/76-10-	17-14.0-	-	6.9-	1200-	12-1-6-	-	-2-3-1-	-4-3-2-3-	-3-2-	-	-	-	0.63																	
56-44.6794	-105.8700	-2-08-	0-404318	-04/05/76-10-	17-10.0-	-	6.6-	5000-	9-1-7-	-	-1-2-1-	-4-3-3-3-	-1-1-	-	-	-	9.82																	
56-44.6811	-105.8300	-2-08-	0-404319	-04/06/76-10-	18-10.0-	-	6.6-	5000-	16-1-6-	-	-3-3-1-	-4-3-2-3-	-1-1-	-	-	-	12.10*																	
56-44.6097	-105.8919	-2-08-	0-404321	-04/05/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	8.21																	
56-44.9200	-105.4183	-2-08-	0-404322	-04/06/76-15-	14-13.0-	-	6.3-	4100-	9-1-7-	-	-	-4-2-2-3-	-1-9-	-	-	-	1.41																	
56-44.9177	-105.4450	-2-08-	0-404324	-04/06/76-16-	13-12.0-	-	7.8-	800-	10-1-7-	-	-3-3-3-	-4-3-2-3-	-1-3-	-	-	-	0.79																	
56-44.9258	-105.4733	-2-08-	0-404325	-04/06/76-17-	13-12.0-	-	6.6-	1400-	10-1-7-	-	-3-3-1-	-4-3-2-3-	-1-3-	-	-	-	4.61																	
56-44.9538	-105.6630	-2-08-	0-404329	-04/07/76-10-	10-9.0-	-	6.3-	3800-	10-1-7-	-	-2-2-3-	-4-2-2-2-	-1-9-	-	-	-	29.60*																	
56-44.9841	-105.7044	-2-08-	0-404330	-04/07/76-10-	14-13.0-	-	7.2-	1400-	15-1-7-	-	-	-4-2-3-2-	-1-3-	-	-	-	1.31																	
56-44.9916	-105.5972	-2-08-	0-404331	-04/07/76-10-	14-13.0-	-	7.2-	1500-	12-1-7-	-	-3-3-1-	-4-2-2-2-	-1-1-	-	-	-	0.10																	
56-44.8877	-105.7100	-2-10-	0-404334	-04/07/76-11-	15-13.0-	-	6.9-	600-	9-1-7-	-	-1-2-3-	-4-2-2-1-	-1-	-	-	-	0.40																	
56-44.9016	-105.7191	-2-08-	0-404335	-04/07/76-11-	15-13.0-	-	7.2-	2900-	15-1-7-	-	-3-3-1-	-4-2-2-1-	-1-3-	6-300-	-	-	2.21																	
56-44.9086	-105.7358	-2-08-	0-404336	-04/07/76-11-	16-14.0-	-	7.5-	1800-	15-1-7-	-	-	-4-2-2-1-	-1-3-	6-400-	-	-	0.10																	
56-44.3533	-105.6086	-2-08-	0-404337	-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	115.30*																	
56-44.3150	-105.4463	-2-08-	0-404338	-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	0.63																	
56-44.3411	-105.4305	-2-08-	0-404339	-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	0.20																	
56-44.3630	-105.3833	-2-08-	0-404340	-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	1.74																	
56-44.3127	-105.4890	-2-08-	0-404341	-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	2.88																	
56-44.3241	-105.4283	-2-06-	0-404343	-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	1.60																	
56-44.3616	-105.4069	-2-08-	0-404344	-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	4.46																	
56-44.3430	-105.4541	-2-08-	0-404345	-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	20.40*																	
56-44.2972	-105.4444	-2-08-	0-404346	-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	0.17																	
56-44.2586	-105.5408	-2-08-	0-404347	-04/07/76-9-	11-7.0-	-	5.2-	1000-	10-1-6-	-	-3-3-1-	-4-3-2-2-	-1-1-	-	-	-	1.36																	
56-44.3136	-105.6669	-2-10-	0-404348	-04/07/76-10-	11-12.0-	-	6.9-	3900-	6-1-6-4-6-	-	-1-2-1-	-4-3-2-2-	-3-	-	-	-	34.60*																	
56-44.3244	-105.7063	-2-10-	0-404349	-04/07/76-10-	11-12.0-	-	5.5-	230-	6-1-6-4-6-	-	-1-2-1-	-4-3-2-2-	-	-	-	-	0.63																	
56-44.3194	-105.8016	-2-10-	0-404350	-04/07/76-11-	13-11.0-	-	5.9-	3200-	6-1-6-4-6-	-	-1-2-1-	-3-3-3-2-	-3-	-	-	-	0.55																	
56-44.3327	-105.7808	-2-10-	0-404351	-04/07/76-12-	12-12.0-	-	5.9-	470-	10-1-6-4-6-	-	-1-2-1-	-4-3-2-2-	-3-	-	-	-	33.60*																	
56-44.3558	-105.7966	-2-08-	0-404352	-04/07/76-12-	14-11.0-	-	6.5-	700-	10-1-6-	-	-3-3-1-	-4-3-2-2-	-1-1-	-	-	-	0.78																	
56-44.3366	-105.7455	-2-08-	0-404353	-04/07/76-12-	14-5.0-	-	6.1-	2000-	10-1-6-	-	-1-2-1-	-4-3-2-2-	-1-1-	-	-	-	4.51																	
56-44.3363	-105.7297	-2-08-	0-404354	-04/07/76-13-	14-10.0-	-	6.8-	1500-	6-1-6-	-	-1-2-1-	-4-3-3-2-	-1-1-	-	-	-	0.72																	
56-44.3480	-105.7261	-2-08-	0-404355	-04/07/76-14-	14-10.0-	-	6.8-	600-	10-1-6-	-	-1-2-1-	-4-3-3-2-	-1-1-	-	-	-	0.10																	
56-44.3469	-105.7294	-2-06-	0-404356	-04/07/76-14-	14-13.0-	-	6.9-	4700-	13-1-6-4-6-	-	-1-2-1-	-4-3-2-2-	-1-	-	-	-	46.20*																	
56-44.2905	-105.6338	-2-10-	0-404357	-04/07/76-14-	14-12.0-	-	6.1-	700-	13-1-6-4-6-	-	-1-2-1-	-4-3-2-2-	-3-	-	-	-	5.00*																	
56-44.3277	-105.5766	-2-08-	0-404358	-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	3.58																	
56-44.2788	-105.4327	-2-08-	0-404359	-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	5.92																	
56-44.2794	-105.4288	-2-08-	0-404360	-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	2.32																	
56-44.0311	-105.7177	-2-08-	0-404361	-04/06/76-8-	10-9.0-	-	6.0-	1900-	12-1-6-	-	-3-3-1-	-4-2-2-3-	-1-3-	-	-	-	29.50*																	
56-44.0244	-105.7238	-2-08-	0-404362	-04/06/76-8-	12-8.0-	-	6.0-	2100-	9-1-6-	-	-1-3-1-	-4-2-3-3-	-1-3-	-	-	-	27.10*																	
56-44.0083	-105.7266	-2-10-	0-404363	-04/06/76-9-	10-12.0-	-	5.7-	275-	18-1-6-4-6-	-	-1-2-1-	-4-2-2-3-	-1-	-	-	-	0.10																	
56-44.0369	-105.7161	-2-08-	0-404364	-04/06/76-9-	11-9.0-	-	6.0-	1100-	12-1-6-	-	-3-3-1-	-4-2-3-2-	-1-3-	-	-	-	7.07																	

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

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	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (µmho/cm)	SCINTILLATOR (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 (H) UNITS IN PPB
							DATE	HOUR																											
56-44.0619-105.7216-2-09-	0-W04365-04/06/76-9-	12-16.0-0-	6.6-	1500-	6-1-6-	-3-3-1-	-4-2-3-2-	-1-3-	-	-	-	1.56																							
56-44.0713-105.7233-2-08-	0-W04366-04/06/76-9-	14-10.0-0-	6.9-	2100-	15-1-6-	-2-3-1-	-4-2-2-2-	-1-3-	-	-	-	3.14																							
56-44.1163-105.7086-2-08-	0-W04367-04/06/76-10-	11-9.0-0-	6.9-	1000-	12-1-6-	-1-3-3-	-4-2-2-2-	-1-3-	-	-	-	15.30*																							
56-44.0527-105.6823-2-08-	0-W04368-04/06/76-10-	16-10.0-0-	6.6-	2250-	12-1-6-	-1-3-3-	-4-2-3-3-	-1-3-	-	-	-	5.85																							
56-44.0663-105.7105-2-10-	0-W04369-04/06/76-11-	13-10.0-0-	6.6-	390-	9-1-6-4-6-1-2-2-	-4-2-3-3-	-1-	-	-	-	2.21																								
56-44.0861-105.6125-2-08-	0-W04370-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	0.63																							
56-44.0861-105.6222-2-08-	0-W04371-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	4.20																							
56-44.0655-105.5880-2-08-	0-W04373-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	2.61																							
56-44.0566-105.5283-2-08-	0-W04374-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	1.51																							
56-44.0672-105.5005-2-08-	0-W04375-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	0.25																							
56-44.0994-105.5916-2-08-	0-W04376-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	0.33																							
56-44.0752-105.5805-2-08-	0-W04377-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	1.14																							
56-44.0877-105.5922-2-07-	0-W04378-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	0.70																							
56-44.0947-105.5452-2-08-	0-W04379-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	0.10																							
56-44.1341-105.5472-2-08-	0-W04380-04/06/76-12-	19-	-	-	-	-	-	-	-	-	-	5.52																							
56-44.1419-105.5313-2-08-	0-W04382-04/06/76-12-	18-	-	-	-	-	-	-	-	-	-	11.70*																							
56-44.1444-105.5250-2-08-	0-W04383-04/06/76-12-	19-	-	-	-	-	-	-	-	-	-	7.18																							
56-44.1558-105.5191-2-08-	0-W04384-04/07/76-14-	14-9.0-	6.0-	2200-	6-1-6-	-3-3-1-	-4-2-2-2-	-1-3-	-	-	-	2.79																							
56-44.6230-105.2944-2-08-	0-W04385-04/12/76-16-	27-18.0-0-	6.9-	1500-	9-1-7-	-3-3-1-	-4-2-1-1-	-1-3-	4-175-	-	-	1.15																							
56-44.5994-105.2577-2-08-	0-W04386-04/12/76-16-	28-19.0-0-	6.8-	1550-	9-1-7-	-3-3-1-	-4-2-1-1-	-1-8-	-	-	-	0.46																							
56-44.5713-105.2658-2-08-	0-W04387-04/12/76-16-	27-18.0-	6.9-	1300-	9-1-7-	-	-	-4-2-1-1-	-1-1-	-	-	0.22																							
56-44.3758-105.4583-2-06-	0-W04388-04/13/76-9-	11-13.0-0-	6.3-	160-	9-1-6-4-6-2-3-3-	-4-3-3-2-	-9-	-	-	-	-	0.70																							
56-44.3933-105.3902-2-08-	0-W04390-04/13/76-9-	14-15.0-0-	6.6-	500-	12-1-6-	-2-2-3-	-4-3-2-2-	-1-9-	-	-	-	3.83																							
56-44.4019-105.3813-2-06-	0-W04391-04/13/76-9-	19-14.0-	6.5-	600-	12-1-6-4-6-2-3-1-	-4-3-3-2-	-1-	-	-	-	-	3.02																							
56-44.4430-105.3847-2-06-	0-W04392-04/13/76-9-	20-15.0-	6.8-	800-	6-1-6-4-8-2-2-	-4-3-3-1-	-1-	-	-	-	-	5.54																							
56-44.4555-105.4100-2-06-	0-W04393-04/13/76-9-	20-12.0-	6.1-	175-	12-1-6-4-6-2-2-1-	-4-3-3-1-	-1-	-	-	-	-	0.53</																							

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

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)	SCINTILLATOR (cc/g)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNER/SHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (46) UNITS IN ppb
							DATE	HOUR																										
56-44.4605-105.6813-2-08-	0-W04443-04/10/76-14-	10-10.0-C-	6.5-	4500-	9-1-7-	-	-	-	2-3-1-	-	-	-	4-2-2-3-	-	9-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.80*	
56-44.4852-105.6838-2-08-	0-W04443-04/10/76-15-	11-10.0-C-	6.5-	3300-	12-1-7-	-	-	-	2-3-1-	-	-	-	-	-	2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.19	
56-44.4736-105.7297-2-08-	0-W04444-04/10/76-15-	13-10.0-C-	6.5-	4500-	9-1-7-	-	-	-	2-3-1-	-	-	-	-	-	2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.81	
56-44.4497-105.7036-2-08-	0-W04445-04/10/76-15-	10-10.0-C-	6.2-	2200-	6-1-7-	-	-	-	2-3-1-	-	-	-	-	-	4-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.28	
56-44.4263-105.6411-2-08-	0-W04446-04/10/76-16-	9-11.0-C-	6.5-	3200-	15-1-7-	-	-	-	2-3-1-	-	-	-	-	-	4-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.84	
56-44.3847-105.6611-2-08-	0-W04449-04/10/76-16-	10-10.0-C-	6.5-	2800-	16-1-7-	-	-	-	2-3-1-	-	-	-	-	-	4-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37.30*	
56-44.3963-105.6608-2-08-	0-W04450-04/10/76-15-	9-9.0-C-	6.5-	3500-	12-1-7-	-	-	-	2-3-2-	-	-	-	-	-	4-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.20*	
56-44.4616-105.5827-2-08-	0-W04451-04/10/76-15-	10-7.0-C-	6.3-	2200-	10-1-7-	-	-	-	2-2-1-	-	-	-	-	-	4-2-1-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.67	
56-44.3794-105.4961-2-08-	0-W04452-04/12/76-7-	8-7.0-C-	6.3-	600-	12-1-7-	-	-	-	2-2-1-	-	-	-	-	-	4-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.50	
56-44.4069-105.4713-2-06-	0-W04453-04/12/76-7-	10-9.0-C-	6.0-	2800-	12-1-7-	-	-	-	2-2-1-	-	-	-	-	-	4-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.80*	
56-44.4625-105.4594-2-06-	0-W04455-04/12/76-9-	11-10.0-C-	6.0-	400-	12-1-7-4-6-	3-3-1-	-	-	-	-	-	-	-	-	4-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16	
56-44.4605-105.4663-2-08-	0-W04456-04/12/76-9-	12-10.0-C-	6.0-	500-	9-1-7-	-	-	-	3-3-1-	-	-	-	-	-	4-2-3-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.4877-105.4783-2-08-	0-W04457-04/12/76-8-	14-10.0-C-	6.5-	1950-	6-1-7-	-	-	-	2-2-1-	-	-	-	-	-	4-2-2-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.74	
56-44.4936-105.4611-2-08-	0-W04458-04/12/76-9-	11-10.0-C-	6.5-	700-	7-1-7-	-	-	-	2-3-1-	-	-	-	-	-	4-2-3-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.5183-105.4861-2-06-	0-W04459-04/12/76-9-	14-12.0-C-	6.6-	2000-	12-1-7-	-	-	-	2-3-1-	-	-	-	-	-	4-2-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.28	
56-44.5172-105.4519-2-08-	0-W04460-04/12/76-9-	15-11.0-C-	6.3-	1100-	12-1-7-	-	-	-	3-3-1-	-	-	-	-	-	4-2-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.41	
56-44.5077-105.4361-2-08-	0-W04461-04/12/76-9-	15-10.0-C-	6.8-	1800-	12-1-7-	-	-	-	2-2-1-	-	-	-	-	-	4-2-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.69	
56-44.4819-105.4000-2-06-	0-W04463-04/12/76-10-	17-11.0-C-	6.3-	700-	15-1-7-4-6-	2-2-1-	-	-	-	-	-	-	-	-	1-2-3-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.81	
56-44.6102-105.3997-2-06-	0-W04468-04/12/76-11-	22-14.0-C-	6.0-	400-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.31	
56-44.5411-105.3508-2-08-	0-W04471-04/12/76-12-	26-17.5-C-	6.8-	2900-	9-1-7-	-	-	-	1-2-2-	-	-	-	-	-	4-2-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.45	
56-44.5455-105.3125-2-10-	0-W04472-04/12/76-13-	28-14.0-C-	6.0-	100-	9-1-7-5-7-	1-2-2-	-	-	-	-	-	-	-	-	4-2-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.5558-105.2741-2-08-	0-W04473-04/12/76-13-	28-16.0-C-	6.8-	900-	9-1-7-	-	-	-	3-3-1-	-	-	-	-	-	4-2-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.5258-105.2622-2-08-	0-W04474-04/12/76-14-	28-19.0-C-	6.9-	1200-	9-1-7-	-	-	-	3-3-1-	-	-	-	-	-	4-2-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.53	
56-44.5344-105.2747-2-08-	0-W04476-04/12/76-14-	27-	-	7.2-	7-1-7-	-	-	-	2-3-1-	-	-	-	-	-	4-2-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28	
56-44.5825-105.3127-2-08-	0-W04477-04/12/76-15-	27-19.0-C-	6.8-	1150-	10-1-7-	-	-	-	2-2-1-	-	-	-	-	-	4-2-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28	
56-44.5827-105.3366-2-08-	0-W04478-04/12/76-15-	28-19.0-C-	6.9-	1200-	13-1-7-	-	-	-	2-2-1-	-	-	-	-	-	4-2-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.72	
56-44.6872-105.9977-2-08-	0-W04485-04/07/76-13-	21-12.0-C-	6.9-	1700-	12-1-6-	-	-	-	1-3-1-	-	-	-	-	-	4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19	
56-44.7197-105.9388-2-08-	0-W04486-04/07/76-14-	18-9.0-C-	6.9-	1700-	16-1-6-	-	-	-	3-3-1-	-	-	-	-	-	4-3-2-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.29	
56-44.7405-105.9236-2-08-	0-W04497-04/07/76-15-	20-15.0-C-	6.9-	1300-	9-1-2-	-	-	-	2-3-1-	-	-	-	-	-	4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16	
56-44.7436-105.9358-2-06-	0-W04499-04/07/76-16-	18-9.0-C-	6.6-	4000-	6-1-6-	-	-	-	2-3-1-	-	-	-	-	-	3-2-4-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.7413-105.8852-2-08-	0-W04490-04/07/76-16-	13-9.0-C-	6.4-	5000-	6-1-6-	-	-	-	2-3-1-	-	-	-	-	-	4-2-3-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.60*	
56-44.7122-105.8913-2-08-	0-W04491-04/08/76-16-	15-9.0-C-	6.3-	5000-	12-1-6-	-	-	-	2-3-1-	-	-	-	-	-	4-3-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.94	
56-44.6897-105.8791-2-08-	0-W04492-04/08/76-16-	14-11.0-C-	6.3-	1900-	12-1-6-	-	-	-	1-2-1-	-	-	-	-	-	4-3-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.64	
56-44.5022-105.9263-2-08-	0-W04493-04/09/76-15-	18-11.0-C-	6.3-	2800-	19-1-6-	-	-	-	3-3-1-	-	-	-	-	-	4-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.95	
56-44.5327-105.9561-2-08-	0-W04494-04/09/76-15-	18-14.0-C-	6.6-	700-	16-1-7-	-	-	-	1-3-1-	-	-	-	-	-	4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.5383-105.9486-2-03-	0-W04496-04/09/76-16-	15-12.0-C-	6.6-	600-	9-1-6-	-	-	-	1-3-1-	-	-	-	-	-	4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.2113-105.9172-2-08-	0-W04498-04/19/76-10-	9-10.0-C-	6.0-	300-	9-1-6-	-	-	-	1-2-1-	-	-	-	-	-	4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24	
56-44.2188-105.9369-2-08-	0-W04499-04/19/76-10-	9-24.0-C-	6.9-	400-	9-1-6-	-	-	-	2-2-1-	-	-	-	-	-	4-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.2455-105.6916-2-08-	0-W04500-04/09/76-9-	10-9.0-C-	6.9-	3200-	9-1-6-	-	-	-	3-3-1-	-	-	-	-	-	4-2-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.18	
56-44.2402-105.5488-2-09-	0-W04501-04/06/76-11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.54	
56-44.2138-105.5483-2-08-	0-W04502-04/06/76-12-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.11	
56-44.1061-105.3186-2-06-	0-W04505-07/23/76-12-	27-19.0-C-	6.1-	900-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.68	
56-44.1322-105.4052-2-08-	0-W04508-07/23/76-12-	30-21.0-C-	6.5-	1800-	10-1-7-	-	-	-	-	-	-	-	-	-	4-3-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.25	
56-44.1652-105.4100-2-08-	0-W04509-07/23/76-13-	30-16.0-C-	6.2-	2800-	6-1-7-	-	-	-	-	-	-	-	-	-	4-3-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.1905-105.3805-2-08-	0-W																																	

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

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 (dL 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 (#) UNITS IN PPB
							DATE	HOUR																										
56-44.2183	-105.4361	-2-08-	0-W04520	-07/23/76-15-	31-16.0-	-	-	6.4-	1500-	4-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.83	
56-44.1025	-105.0680	-2-08-	0-W04522	-07/24/76-15-	30-16.0-	-	-	6.4-	1600-	6-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.11	
56-44.1005	-105.1061	-2-08-	0-W04523	-07/24/76-12-	30-18.0-	-	-	6.2-	1300-	3-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.40	
56-44.0750	-105.1052	-2-08-	0-W04525	-07/24/76-15-	30-19.0-	-	-	7.2-	1500-	3-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.72	
56-44.0538	-105.0933	-2-08-	0-W04526	-07/24/76-14-	29-18.0-	-	-	6.4-	1300-	3-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28	
56-44.0988	-105.1700	-2-08-	0-W04528	-07/24/76-16-	29-12.0-	-	-	6.4-	400-	6-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.57	
56-44.0963	-105.1988	-2-08-	0-W04530	-07/24/76-17-	28-14.0-	-	-	6.6-	1500-	1-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.33	
56-44.0866	-105.2250	-2-08-	0-W04531	-07/24/76-17-	29-19.0-	-	-	6.9-	700-	3-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.4966	-105.8566	-2-08-	0-W04532	-10/08/76-11-	19-12.0-	-	-	6.4-	1950-	12-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.33	
56-44.4858	-105.9044	-2-08-	0-W04533	-10/08/76-11-	19-12.0-	-	-	6.4-	2000-	12-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.11	
56-44.4819	-105.9047	-2-08-	0-W04534	-10/08/76-11-	19-13.0-	-	-	6.4-	2400-	11-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.88	
56-44.4688	-105.8877	-2-08-	0-W04535	-10/08/76-11-	19-11.0-	-	-	6.4-	2500-	14-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.41	
56-44.4577	-105.8180	-2-08-	0-W04539	-10/08/76-12-	20-13.0-	-	-	6.9-	700-	8-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.06	
56-44.4875	-105.7991	-2-08-	0-W04540	-10/08/76-12-	20-12.0-	-	-	6.9-	750-	11-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.4202	-105.7897	-2-08-	0-W04542	-10/08/76-12-	20-14.0-	-	-	6.9-	800-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.4250	-105.8572	-2-08-	0-W04545	-10/08/76-13-	21-13.0-	-	-	6.9-	700-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16	
56-44.6508	-105.1127	-2-08-	0-W04548	-07/24/76-12-	35-13.0-C	-	-	7.4-	2000-	14-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.10	
56-44.6344	-105.1102	-2-08-	0-W04550	-07/24/76-12-	35-13.5-C	-	-	7.6-	1600-	12-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.80	
56-44.5016	-105.2333	-2-08-	0-W04551	-07/24/76-13-	35-14.5-C	-	-	7.4-	1200-	14-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.37	
56-44.5188	-105.2450	-2-08-	0-W04552	-07/24/76-13-	35-13.0-C	-	-	7.6-	1000-	12-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.65	
56-44.5419	-105.2083	-2-08-	0-W04553	-07/24/76-14-	36-12.0-C	-	-	7.3-	1100-	12-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.5113	-105.1611	-2-08-	0-W04555	-07/24/76-14-	36-12.0-C	-	-	7.6-	1100-	6-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.5130	-105.1394	-2-08-	0-W04556	-07/24/76-14-	36-14.0-C	-	-	7.6-	1200-	8-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.5611	-105.1866	-2-08-	0-W04557	-07/24/76-15-	36-12.5-C	-	-	7.6-	2000-	6-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.5619	-105.1333	-2-08-	0-W04558	-07/24/76-15-	36-12.0-C	-	-	7.6-	1600-	10-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18	
56-44.5927	-105.1402	-2-08-	0-W04559	-07/24/76-16-	36-13.5-C	-	-	7.8-	1700-	11-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.5511	-105.2272	-2-08-	0-W04560	-07/24/76-16-	36-12.5-C	-	-	7.6-	1100-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20	
56-44.5733	-105.2433	-2-08-	0-W04561	-07/24/76-17-	35-13.0-C	-	-	7.8-	1100-	4-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.6022	-105.1955	-2-08-	0-W04563	-07/24/76-18-	35-14.0-C	-	-	7.6-	1600-	11-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38	
56-44.6094	-105.2188	-2-08-	0-W04564	-07/24/76-18-	35-12.5-C	-	-	7.4-	1200-	6-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.1463	-105.1361	-2-10-	0-W04565	-07/24/76-14-	38-25.0-	-	-	6.3-	230-	12-1-6-5-5-6-2-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.27	
56-44.0980	-105.1400	-2-08-	0-W04570	-07/26/76-12-	30-21.0-	-	-	7.2-	1150-	6-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.28	
56-44.0344	-105.1405	-2-08-	0-W04572	-07/26/76-12-	31-13.0-	-	-	6.9-	950-	12-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.44	
56-44.0650	-105.1627	-2-10-	0-W04574	-07/26/76-13-	32-25.0-	-	-	6.6-	4300-	10-1-6-5-5-6-2-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.76	
56-44.0452	-105.0355	-2-08-	0-W04579	-07/26/76-15-	27-18.0-	-	-	6.3-	2100-	6-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.97	
56-44.0072	-105.0066	-2-08-	0-W04580	-07/26/76-15-	27-17.0-	-	-	6.0-	1900-	6-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24	
56-44.1002	-105.0380	-2-08-	0-W04591	-07/26/76-15-	26-17.0-	-	-	6.0-	2800-	6-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.74	
56-44.9816	-105.1005	-2-08-	0-W04592	-07/22/76-11-	28-17.0-	-	-	6.5-	650-	9-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	
56-44.9633	-105.1211	-2-08-	0-W04590	-07/22/76-11-	27-19.0-C	-	-	6.9-	500-	12-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.9966	-105.1188	-2-08-	0-W04591	-07/22/76-12-	29-20.0-C	-	-	6.3-	600-	9-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.9638	-105.0722	-2-08-	0-W04592	-07/22/76-12-	29-19.0-	-	-	6.6-	250-	10-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.9330	-105.0938	-2-08-	0-W04594	-07/22/76-12-	30-16.0-	-	-	6.3-	450-	10-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.9180	-105.1100	-2-08-	0-W04595	-07/22/76-12-	30-17.0-	-	-	6.9-	550-	9-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.9433	-105.2183	-2-08-	0-W04596	-07/23/76-10-	32-20.0-	-	-	6.9-	950-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.9119	-105.2197	-2-08-	0-W04597	-07/23/76-10-	33-15.0-C	-	-	6.6-	500-	6-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.8847	-105.2225	-2-08-	0-W04598	-07/23/76-11-	33-16.0-C	-	-	6.3-	600-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
56-44.8927	-105.2394	-2-08-	0-W04599	-07/23/76-11-	34-16.0-C	-	-	6.0-	550-	6-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
56-44.9100	-105.1738	-2-08-	0-W04600	-07/22/76-12-	34-14.0-	-	-	6.5-	600-	6-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.28	
56-44.8916	-105.1600	-2-08-	0-W04601	-07/22/76-12-	33-22.0-C	-	-	6.6-	650-	6-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.10	
56-44.9577	-105.1585	-2-08-	0-W04602	-07/22/76-12-	33-16.0-C	-	-	6.9-	800-	6-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22.70*	
56-																																		

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

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 (uCi/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 (#6) UNITS IN PPB
							DATE	HOUR																										
56-44.9677-105.2111-2-08-	0-406605-07/22/76-13-	33-16.0-0-	6.5-	850-	9-1-7-	-3-3-1-	-4-3-3-1-	-1-9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.32			
56-44.9750-105.2483-2-08-	0-406606-07/22/76-13-	33-16.0-0-	6.3-	950-	6-1-7-	-3-3-1-	-4-3-2-1-	-1-9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15			
56-44.9877-105.1594-2-08-	0-406607-07/22/76-13-	33-23.0-	6.6-	1500-	6-1-7-	-2-3-1-	-4-3-4-1-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.35			
56-44.9950-105.1394-2-08-	0-406608-07/22/76-14-	34-23.0-	6.3-	1650-	6-1-7-	-1-3-1-	-4-3-3-1-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.93			
56-44.9783-105.1261-2-08-	0-406609-07/22/76-14-	34-20.0-	6.9-	900-	6-1-7-	-1-3-1-	-4-3-3-1-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10			
56-44.9047-105.1165-2-08-	0-406610-07/22/76-14-	34-21.0-	6.9-	1100-	6-1-7-	-1-3-1-	-4-3-3-1-	-1-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16			
56-44.2572-105.2116-2-10-	0-406612-07/24/76-10-	30-25.0-0-	7.5-	2300-	12-1-6-5-8-	-	-4-2-2-1-	-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.81			
56-44.2316-105.1569-2-10-	0-406616-07/24/76-13-	35-22.0-	6.3-	1250-	10-1-6-5-6-2-2-2-	-	-4-2-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10			
56-44.8683-105.0922-2-10-	0-406619-07/22/76-10-	27-22.0-	6.6-	1900-	8-1-7-4-6-1-3-5-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.10			
56-44.8558-105.0591-2-10-	0-406619-07/22/76-10-	27-22.0-	7.0-	200-	9-1-7-5-6-1-3-5-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10			
56-44.8702-105.0352-2-10-	0-406620-07/22/76-10-	27-22.5-	7.2-	600-	10-1-7-5-6-1-3-5-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10			
56-44.8563-105.0066-2-10-	0-406621-07/22/76-11-	27-22.0-	7.1-	450-	10-1-7-5-6-1-3-5-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10			
56-44.8488-105.0725-2-10-	0-406622-07/22/76-11-	28-20.0-	7.1-	700-	12-1-7-5-6-1-3-5-	-	-3-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.65			
56-44.8233-105.0713-2-10-	0-406623-07/22/76-11-	28-21.0-	7.4-	390-	6-1-7-5-6-1-3-5-	-	-3-2-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.48			
56-44.8180-105.0255-2-10-	0-406624-07/22/76-12-	28-22.0-	7																															

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)	SCINTILLOMETER (cpi/gpi)	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																										
56-44.2477-105.8133-2-08-	0-404690-10/09/76-18-	18-11.0-	-	6.6-	480-	16-1-7-	-	-	-	1-	4-3-2-1-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28			
56-44.1216-105.7736-2-08-	0-404691-10/09/76-18-	12-10.0-	-	6.4-	1200-	12-1-7-	-	-	-	1-	4-3-2-1-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.01			
56-44.1227-105.7919-2-08-	0-404692-10/09/76-18-	17-11.0-	-	6.4-	1300-	14-1-7-	-	-	-	1-	4-3-2-1-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.91			
56-44.1138-105.8665-2-06-	0-404693-10/09/76-18-	12-12.0-	-	6.9-	5500-	8-1-7-5-6-3-3-1-	-	-	-	1-	4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52.50*			
56-44.1069-105.8441-2-08-	0-404694-10/09/76-18-	12-11.0-	-	6.4-	1200-	16-1-7-	-	-	-	1-	4-3-2-1-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.61			
56-44.0694-105.7577-2-06-	0-404697-10/09/76-18-	14-12.0-	-	6.9-	5300-	9-1-7-5-6-3-3-1-	-	-	-	1-	4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59.00*			
56-44.0347-105.8041-2-08-	0-404698-10/09/76-18-	14-12.0-	-	6.7-	1300-	12-1-7-	-	-	-	1-	4-3-2-1-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.79			
56-44.0327-105.7811-2-06-	0-404699-10/09/76-18-	14-11.0-	-	6.9-	5000-	9-1-7-5-6-3-3-1-	-	-	-	1-	4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51.70*			
56-44.0133-105.7977-2-08-	0-404701-10/09/76-18-	14-12.0-	-	6.3-	1400-	11-1-7-	-	-	-	1-	4-3-2-1-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.19			
56-44.0494-105.8291-2-08-	0-404705-10/09/76-10-	14-13.0-	-	6.8-	1400-	14-1-7-	-	-	-	1-	4-3-2-1-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.66			
56-44.0555-105.8911-2-08-	0-404706-10/09/76-10-	16-9.0-C	-	6.4-	1300-	11-1-7-	-	-	-	1-	4-3-2-1-	-1-9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.75			
56-44.0755-105.8816-2-08-	0-404707-10/09/76-10-	16-10.0-	-	6.3-	2000-	11-1-7-	-	-	-	1-	4-3-2-1-	-1-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.83			
56-44.0594-105.9063-2-08-	0-404708-10/09/76-11-	17-9.0-C	-	6.4-	1250-	12-1-7-	-	-	-	1-	4-3-2-1-	-1-9-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10			
56-44.0694-105.9172-2-08-	0-404710-10/09/76-11-	17-11.0-	-	6.3-	2000-	14-1-7-	-	-	-	1-	4-3-2-1-	-1-8-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42			
56-44.0758-105.9538-2-08-	0-404710-10/09/76-11-	17-10.0-C	-	6.3-	1800-	16-1-7-	-																											

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

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)	SOLUBLE (ug/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)	WATER SAMPLES ANALYZED BY FLUOROMETRY OR DNC (H) UNITS IN PPB
							DATE	HOUR																										
56-44.5067	-104.9481	-2-08-	0-404774	08/22/77-12	26-11.0-C	-	6.0	1100-	11-1-7-	-	-	-	-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.55	
56-44.5350	-104.9133	-2-08-	0-404782	08/22/77-16	25-14.0-C	-	8.1	1800-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.59
56-44.5994	-104.9350	-2-08-	0-404788	08/23/77-16	22-14.0-C	-	6.6	900-	13-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.08
56-44.5719	-104.8975	-2-08-	0-404790	08/23/77-17	22-15.0-C	-	8.2	1800-	13-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.07
56-44.5186	-104.8758	-2-08-	0-404790	08/23/77-18	24-16.0-C	-	6.4	1800-	11-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.61
56-44.5186	-104.8353	-2-08-	0-404795	08/24/77-10	22-17.0-C	-	6.2	1150-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.73
56-44.5031	-104.8044	-2-08-	0-404797	08/24/77-11	22-19.0-C	-	6.6	3400-	69-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.46
56-44.5764	-104.8179	-2-08-	0-404798	08/24/77-12	23-14.0-C	-	6.4	1825-	9-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.00
56-44.5889	-104.8611	-2-06-	0-404902	08/24/77-15	32-23.0-C	-	6.8	850-	13-1-7-5-7-1-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.63
56-44.5614	-104.7975	-2-07-	0-404910	08/25/77-12	27-24.0-C	-	7.1	1200-	9-1-6-5-8-2-2-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.57
56-44.5864	-104.8403	-2-08-	0-404911	08/25/77-15	27-17.5-C	-	6.9	900-	11-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.83
56-44.5011	-104.7594	-2-08-	0-404913	08/28/77-13	24-15.0-C	-	6.6	2825-	11-1-6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.81
56-44.7736	-104.7386	-2-08-	0-404920	08/27/77-14	14-15.5-C	-	6.0	1100-	13-1-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.25
56-44.8411	-104.7325	-2-08-	0-404921	08/27/77-16	14-15.5-C	-	6.0	2200-	9-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.07
56-44.8547	-104.6947	-2-08-	0-404923	08/27/77-16	14-17.0-C	-	6.3	1650-	13-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.15
56-44.9167	-104.6525	-2-08-	0-404929	08/29/77-11	28-17.0-C	-	7.4	3200-	18-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.83
56-44.9739	-104.5686	-2-08-	0-404935	08/29/77-14	29-20.0-C	-	6.3	1350-	9-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.45
56-44.9150	-104.5897	-2-08-	0-404938	08/29/77-19	25-16.0-C	-	6.4	1600-	11-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.13
56-44.8747	-104.5753	-2-06-	0-404947	08/31/77-16	21-12.2-C	-	6.9	550-	11-1-1-5-6-1-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60
56-44.8250	-104.5267	-2-06-	0-404951	08/31/77-19	20-15.0-C	-	6.8	1100-	11-1-1-6-8-1-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.74
56-44.7642	-104.6064	-2-07-	0-404953	09/01/77-13	21-14.0-C	-	7.1	800-	11-1-7-6-3-2-2-2-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.19
56-44.7914	-104.6183	-2-06-	0-404955	09/01/77-16	20-22.0-C	-	6.9	450-	11-1-1-6-6-1-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.56
56-44.7894	-104.5994	-2-06-	0-404960	09/01/77-16	22-17.0-C	-	6.7	550-	11-1-1-5-8-2-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.03
56-44.9336	-104.6086	-2-08-	0-404963	09/02/77-11	19-13.5-C	-	6.4	2225-	16-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.02
56-44.9767	-104.8022	-2-08-	0-404972	09/02/77-17	21-17.0-C	-	7.5	850-	16-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.03
56-44.9928	-104.8703	-2-08-	0-404973	09/02/77-19	20-17.2-C	-	6.4	900-	11-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.19
56-44.8442	-104.7835	-2-06-	0-404978	09/03/77-14	28-15.0-C	-	7.6	5000-	11-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.00
56-44.8231	-104.8189	-2-06-	0-404983	09/03/77-17	29-12.2-C	-	7.9	3000-	11-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.88
56-44.7642	-104.8456	-2-08-	0-404989	09/03/77-20	21-18.0-C	-	7.5	1425-	13-1-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.41
56-44.7853	-104.7625	-2-08-	0-404995	09/05/77-15	32-12.6-C	-	7.4	1420-	11-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.75
56-44.5056	-104.4247	-2-07-	0-404998	08/18/77-18	30-21.0-C	-	-	150-	-	-	-	-	-	-	-	-	-	-	-	-	-													

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)	SCINTILLATOR (rel ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	CROWNSHIP	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																											
56-44.7650-104.2403-2-08-	0-W04908-08/30/77- 8-	17-16.0-	-	6.2-	370-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.19			
56-44.9061-104.1508-2-08-	0-W05015-08/29/77-15-	30-27.0-	-	9.0-	430-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.10			
56-44.9236-104.1983-2-08-	0-W05016-08/29/77-16-	30-20.0-	-	9.0-	220-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.78			
56-44.9472-104.2061-2-08-	0-W05018-08/29/77-14-	30-22.0-	-	6.9-	600-	-1-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.63				
56-44.8453-104.3522-2-08-	0-W05018-08/30/77-13-	23-17.0-	-	8.0-	800-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.09				
56-44.9122-104.0181-2-08-	0-W05023-09/02/77- 8-	17-16.0-	-	6.0-	1400-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.44				
56-44.8114-104.0639-2-08-	0-W05040-09/16/77-11-	23-24.0-	-	8.0-	1000-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.41				
56-44.6400-104.3422-2-06-	0-W05046-09/26/77-14-	15-12.0-C	-	5.4-	100-	-1-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.94				
56-44.3297-104.1783-2-06-	0-W05047-09/06/77-16-	26-16.5-C	-	6.6-	450-	5-3-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.78				
56-44.3114-104.1297-2-06-	0-W05049-09/06/77-18-	26-11.5-C	-	7.4-	550-	11-3-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.41				
56-44.3233-104.1153-2-06-	0-W05050-09/06/77-10-	27-10.0-C	-	7.2-	500-	8-3-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.44				
56-44.3308-104.0956-2-06-	0-W05051-09/07/77- 7-	14-12.5-C	-	6.7-	500-	8-3-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.74				
56-44.3219-104.0853-2-06-	0-W05052-09/07/77- 8-	14- 7.0-C	-	6.9-	500-	11-3-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42				
46-44.3092-104.0536-2-06-	0-W05053-09/07/77- 8-	21- 8.5-	-	6.3-	450-	8-3-7-5-6-3-3-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.44				
46-44.3231-104.0302-2-06-	0-W05054-09/07/77-13-	25- 8.0-	-	6.4-	430-	22-3-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.31				
46-44.3256-104.0056-2-07-	0-W05055-09/07/77-14-	25-23.3-	-	7.6-	300-																														

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

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	SPEED OF 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 (46) UNITS IN ppb
							DATE	HOUR																										
56-44.3453-104.9583-2-08-						0-405155-09/07/77-9-	24-15.0-	-	7.8-	1225-	-1-1-	-	-	-1-	-3-3-2-1-	-	-1-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.38
56-44.4258-104.8764-2-10-						0-405159-09/07/77-12-	24-15.0-	-	8.5-	2275-	9-1-1-6-8-	-2-2-	-5-3-1-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.25
56-44.3561-104.9931-2-08-						0-405161-09/07/77-15-	20-24.0-C-	-	8.7-	975-	23-1-1-	-	-	-5-	-3-3-2-2-	-3-1-	4-150-	40-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.25
56-44.3972-104.9744-2-08-						0-405163-09/07/77-16-	30-24.0-C-	-	8.1-	1050-	12-1-1-	-	-	-1-	-3-3-2-2-	-3-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.97
56-44.4433-104.8136-2-08-						0-405168-09/09/77-15-	20-15.0-	-	6.4-	2000-	5-1-1-	-	-	-1-	-3-2-1-2-	-3-1-	6-200-	100-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.30
56-44.3172-104.9969-2-08-						0-405175-09/09/77-8-	15-9.0-	-	7.6-	1450-	9-1-1-	-	-	-1-	-4-3-2-1-	-3-1-	4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.69*
56-44.3900-104.9658-2-08-						0-405176-09/09/77-9-	17-9.5-	-	6.5-	1600-	5-1-1-	-	-	-1-	-3-3-3-1-	-1-	5-175-	100-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34.17
56-44.4031-104.9756-2-08-						0-405179-09/09/77-12-	24-12.0-	-	6.5-	1550-	1-1-1-	-	-	-1-	-4-3-2-1-	-3-1-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.46
56-44.2450-104.9111-2-08-						0-405185-09/10/77-15-	29-14.0-	-	7.5-	2700-	15-1-1-	-	-	-1-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.22
56-44.3406-104.9153-2-08-						0-405200-09/11/77-17-	23-11.5-C-	-	8.3-	1250-	26-1-1-	-	-	-1-	-3-4-1-2-	-9-1-	4-	-	20-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.77
56-44.3433-104.9308-2-08-						0-405201-09/11/77-18-	25-14.0-	-	6.8-	1200-	11-1-1-	-	-	-1-	-3-3-1-2-	-1-	4-	-	50-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.97
56-44.3194-104.9153-2-08-						0-405202-09/11/77-18-	22-12.5-	-	7.2-	9000-	5-1-1-	-	-	-1-	-3-4-1-2-	-1-	4-	-	50-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.54
56-44.2153-104.9289-2-08-						0-405206-09/14/77-8-	16-14.0-	-	6.5-	2800-	0-1-1-	-	-	-1-	-3-3-2-1-	-3-	4-130-	50-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.61
56-44.3722-104.6903-2-08-						0-405212-09/19/77-18-	25-17.0-C-	-	8.2-	1350-	4-1-1-	-	-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.67
56-44.3514-104.6911-2-08-						0-405214-09/19/77-19-	25-19.5-C-	-	5.6-	350-	7-1-1-	-	-	-1-	-3-3-1-1-	-3-	6-180-	120-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22
56-44.4122-104.6564-2-06-						0-405219-09/20/77-17-	28-	-C-	6.6-	600-	33-1-1-	-	-	-5-	-2-3-5-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34.25*
56-44.4042-104.6944-2-08-						0-405220-09/20/77-17-	28-13.5-C-	-	8.0-	1350-	9-1-1-	-	-	-1-	-4-3-2-2-	-3-	4-160-	60-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.67
56-44.4875-104.5853-2-06-						0-405225-09/21/77-16-	24-12.0-	-	6.0-	550-	18-1-1-	-	-	-1-2-2-	-2-4-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.67
56-44.4950-104.6042-2-07-						0-405226-09/21/77-17-	25-12.0-	-	7.2-	900-	29-1-1-5-8-2-2-2-2-2-3-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.67
56-44.4128-104.5281-2-06-						0-405227-09/22/77-10-	25-12.0-C-	-	6.7-	450-	3-1-1-	-	-	-2-2-1-	-3-4-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.33
56-44.4075-104.5106-2-08-						0-405228-09/22/77-10-	25-15.0-C-	-	6.7-	500-	5-1-1-	-	-	-1-	-3-3-3-3-	-5-48-	35-	31-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.34
56-44.4756-104.5503-2-07-						0-405229-09/22/77-12-	25-	-C-	7.4-	400-	9-1-1-3-6-2-2-3-2-3-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.27
56-44.4717-104.5472-2-07-						0-405230-09/22/77-13-	25-	-C-	7.7-	425-	14-1-1-3-6-2-2-1-2-2-3-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.93
56-44.4625-104.5514-2-07-						0-405231-09/22/77-14-	25-	-C-	7.6-	375-	9-1-1-3-6-2-2-2-2-3-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.20
56-44.4856-104.5125-2-07-						0-405232-09/22/77-16-	25-	-C-	7.5-	350-	20-1-1-5-6-2-2-1-2-5-4-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.46
56-44.4183-104.5783-2-08-						0-405233-09/22/77-17-	25-	-C-	8.5-	225-	13-1-1-	-	-	-3-	-4-3-2-4-	-3-1-	4-	50-	30-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.07
56-44.4550-104.6578-2-06-						0-405235-09/24/77-15-	25-12.0-	-	5.6-	500-	11-1-1-5-8-2-2-2-	-1-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.15
56-44.2964-104.5050-2-08-						0-405237-09/26/77-18-	20-15.2-	-	6.2-	1550-	13-1-1-	-	-	-	-3-3-2-2-	-5-	6-	70-	40-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.86
56-44.3111-104.6111-2-08-						0-405243-10/03/77-15-	28-13.0-	-	7.2-	2400-	13-1-1-	-	-	-	-4-2-1-2-	-5-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.48
56-44.3289-104.5756-2-08-						0-405247-10/03/77-17-	26-13.7-	-	6.7-	1750-	11-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.71
56-44.3994-104.5953-2-08-						0-405248-10/03/77-18-	24-12.5-C-	-	5.6-	950-	27-1-1-	-	-	-	-4-3-1-2-	-9-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.48
56-44.3869-104.6042-2-08-						0-405249-10/03/77-19-	20-12.0-	-	6.0-	550-	4-1-1-	-	-	-	-2-3-1-2-	-2-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62.70*
56-44.3836-104.6056-2-06-						0-405250-10/03/77-19-	20-10.0-	-	6.6-	600-	9-1-1-4-6-2-2-1-	-1-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.16
56-44.3919-104.5394-2-08-						0-405251-10/03/77-19-	18-11.0-C-	-	6.0-	1300-	27-1-1-	-	-	-	-2-3-2-2-	-9-5-	4-	55-	12-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.41
56-44.2347-104.6403-2-08-						0-405260-08/24/77-18-	33-16.1-C-	-	7.4-	1380-	5-1-1-	-	-	-3-	-2-	-3-3-2-2-	-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54
56-44.0631-104.5981-2-07-						0-405266-08/29/77-17-	22-17.5-C-	-	7.5-	1790-	13-1-7-5-7-3-4-2-2-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.66
56-44.0689-104.5728-2-08-						0-405270-08/29/77-19-	17-12.5-C-	-	8.3-	1100-	16-1-7-	-	-	-3-3-1-	-4-3-3-2-	-3-9-	2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.76
56-44.2275-104.5311-2-06-						0-405278-08/29/77-15-	24-19.2-C-	-	7.1-	475-	2-1-1-	-	-	-3-	-1-	-1-2-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.51
56-44.1539-104.5853-2-08-						0-405282-08/29/77-19-	21-13.6-C-	-	8.4-	1020-	11-1-7-	-	-	-3-	-1-	-1-2-3-2-	-1-3-35-	450-	100-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.68
56-44.1222-104.7983-2-08-						0-405307-08/25/77-14-	26-15.6-C-	-	7.8-	1950-	5-1-1-	-	-	-3-2-1-	-4-3-2-2-	-3-3-36-	21-	19-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.85
56-44.1086-104.8758-2-08-						0-405311-08/25/77-15-	27-12.8-C-	-	8.0-	2090-	5-1-1-	-	-	-3-	-1-	-4-3-2-2-	-3-4-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.52
56-44.0444-104.7728-2-08-						0-405315-08/25/77-18-	24-10.1-	-	7.7-	700-	5-1-1-	-	-	-3-3-1-	-4-3-2-2-	-3-3-	6-160-	110-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.66
56-44.0172-104.9547-2-08-						0-405323-08/26/77-10-	14-9.1-C-	-	7.9-	1850-	8-1-1-	-	-	-3-	-1-	-4-3-2-3-	-3-9-	6-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.78
56-44.0789-104.8575-2-08-																																		

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

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)	SONDILOMETER (ft, 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																										
56-44.0492-104.7242-2-08-	0-405350-09/29/77-11-	19-15.8-C-	7.6-	2240-	8-1-7-	-	-3-	-1-	-4-3-2-1-	-3-3-	6-160-	-	0.81																					
56-44.0100-104.7431-2-08-	0-405351-08/29/77-12-	17-17.0-C-	7.9-	2720-	13-1-1-	-	-1-	-2-	-4-3-4-2-	-3-1-	-	-	4.32																					
56-44.0192-104.5972-2-08-	0-405353-09/29/77-14-	25-19.0-C-	8.4-	1840-	5-1-1-	-	-3-	-1-	-4-2-2-2-	-3-3-	-	-	0.67																					
56-44.1508-104.3903-2-08-	0-405354-08/31/77-16-	19-13.1-C-	7.0-	980-	8-1-7-	-	-3-	-1-	-4-3-3-1-	-3-	-	-	0.25																					
56-44.1611-104.3542-2-08-	0-405356-08/31/77-17-	20-16.5-C-	7.5-	1275-	11-1-7-	-	-3-	-1-	-4-4-4-1-	-3-	-	-	0.51																					
56-44.2292-104.2717-2-08-	0-405351-09/01/77-8-	11-16.0-C-	7.1-	450-	5-1-1-	-	-3-3-1-	-4-3-3-4-	-3-4-	6-50-	30-	1.18																						
56-44.2067-104.2686-2-08-	0-405353-09/01/77-9-	13-12.5-C-	7.2-	450-	5-1-1-	-	-3-3-2-	-4-3-3-2-	-3-5-	4-121-	40-	1.71																						
56-44.1700-104.3108-2-08-	0-405364-09/01/77-10-	14-10.2-C-	7.3-	500-	16-1-1-	-	-3-3-1-	-4-3-4-2-	-3-2-	6-60-	20-	0.79																						
56-44.0183-104.2911-2-06-	0-405365-09/01/77-18-	20-19.4-C-	7.4-	670-	5-1-1-	-	-3-3-1-	-1-2-4-1-	-1-	-	-	2.76																						
56-44.0381-104.3583-2-08-	0-405367-09/02/77-9-	16-11.3-C-	7.3-	1730-	5-1-1-	-	-3-	-2-	-4-3-4-3-	-3-1-	6-	-	0.75																					
56-44.0747-104.2561-2-08-	0-405372-09/02/77-12-	20-19.4-C-	7.2-	2700-	2-1-4-	-	-3-	-1-	-1-2-4-1-	-3-3-	6-120-100-	24.67*																						
56-44.1175-104.2206-2-08-	0-405377-09/02/77-14-	24-11.5-C-	7.3-	890-	2-1-1-	-	-3-3-1-	-4-3-3-1-	-3-3-	6-400-365-	1.04																							
56-44.1236-104.2044-2-08-	0-405378-09/02/77-15-	24-10.0-C-	7.1-	725-	5-1-1-	-	-3-	-1-	-4-3-3-1-	-3-	-	-	0.42																					
56-44.1633-104.1578-2-06-	0-405382-09/02/77-18-	21-14.3-	7.2-	600-	5-1-1-5-6-2-	-1-	-1-3-3-1-	-3-	-	-	-	0.27																						
56-44.2111-104.1819-2-06-	0-405393-09/02/77-19-	20-12.3-C-	7.0-	625-	5-1-1-5-8-3-	-1-	-1-3-3-1-	-3-	-	-	-	0.49																						
56-44.2328-104.2050-2-06-	0-405394-09/03/77-9-	20-9.8-C-	7.0-	600-	5-1-1-5-6-3-	-1-	-4-3-3-1-	-3-	-	-	-	0.26																						
56-44.1847-104.1256-2-06-	0-405397-09/11/77-15-	23-8.3-	7.8-	400-	5-1-1-5-6-3-3-1-	-1-2-3-1-	-3-	-	-	-	-	0.02																						
56-44.1714-104.0936-2-06-	0-405398-09/11/77-15-	22-7.0-	7.8-	425-	10-1-1-5-6-3-3-1-	-1-3-3-1-	-3-	-	-	-	-	0.03																						
56-44.2044-104.0592-2-06-	0-405399-09/11/77-17-	16-10.5-C-	7.2-	420-	12-1-1-5-7-3-3-1-	-1-2-3-2-	-3-	-	-	-	-	0.09																						
56-44.2064-104.0786-2-06-	0-405399-09/11/77-18-	16-10.2-C-	7.2-	490-	17-1-1-5-6-3-3-1-	-1-2-4-2-	-3-	-	-	-	-	0.04																						
56-44.2189-104.0775-2-06-	0-405391-09/11/77-19-	15--C-	7.3-	510-	10-1-1-5-1-3-3-1-	-1-2-3-2-	-3-	-	-	-	-	0.18																						
56-44.2492-104.1106-2-06-	0-405392-09/11/77-20-	15-6.9-	7.4-	550-	3-1-1-5-6-3-3-1-	-1-2-3-2-	-3-	-	-	-	-	0.43																						
56-44.2325-104.0600-2-06-	0-405393-09/12/77-9-	18-21.4-C-	7.3-	490-	9-1-1-5-5-3-3-1-	-1-2-3-1-	-3-	-	-	-	-	0.29																						
56-44.2483-104.0597-2-06-	0-405394-09/12/77-10-	15-16.3-C-	7.6-	430-	7-1-1-5-6-3-3-1-	-1-3-3-1-	-3-	-	-	-	-	0.57																						
46-44.2289-104.0192-2-06-	0-405395-09/12/77-11-	15-11.0-	7.8-	510-	12-1-1-5-6-3-3-1-	-1-2-3-3-	-3-	-	-	-	-	0.29																						
46-44.2289-104.0033-2-06-	0-405396-09/12/77-11-	14-13.9-	8.0-	510-	12-1-1-5-8-3-3-1-	-1-3-3-3-	-3-	-	-	-	-	0.72																						
46-44.2058-104.0136-2-06-	0-405397-09/12/77-12-	15-14.2-C-	7.3-	510-	4-1-1-	-	-3-3-1-	-1-2-3-4-	-3-	-	-	0.29																						
46-44.1419-104.0469-2-06-	0-405398-09/12/77-13-	13-6.2-	6.9-	400-	5-1-1-5-6-3-3-1-	-1-2-3-4-	-3-	-	-	-	-	0.11																						
46-44.1528-104.0229-2-07-	0-405399-09/12/77-16-	16-11.0-C-	8.0-	420-	15-1-1-5-8-3-3-1-2-	-1-2-4-1-	-3-	-	-	-	-	0.76																						
46-44.1222-104.0156-2-06-	0-405401-09/12/77-18-	15-11.3-	7.0-	435-	9-1-1-5-6-3-3-1-	-4-4-3-2-	-3-	-	-	-	-	0.27																						
46-44.0700-104.0292-2-06-	0-405402-09/12/77-18-	15-7.3-C-	7.1-	450-	9-1-1-5-8-3-3-1-	-1-2-4-2-	-3-	-	-	-	-	0.09																						
56-44.1181-104.0553-2-06-	0-405403-09/12/77-19-	13-8.2-C-	6.8-	590-	8-1-1-5-6-3-3-1-	-1-2-3-1-	-3-	-	-	-	-	1.21																						
56-44.0814-104.0544-2-07-	0-405405-09/12/77-19-	-9.5-C-	8.0-	410-	15-1-1-5-8-3-3-1-2-	-1-2-4-1-	-3-	-	-	-	-	0.37																						
56-44.1464-104.1017-2-06-	0-405406-09/13/77-9-	15-7.9-	7.1-	386-	18-1-1-5-6-3-3-1-	-4-3-4-1-	-3-	-	-	-	-	1.04																						
56-44.1272-104.0850-2-06-	0-405407-09/13/77-10-	17-6.0-	7.0-	420-	6-1-1-5-8-3-3-1-	-4-4-4-1-	-1-	-	-	-	-	1.19																						
56-44.0467-104.2208-2-06-	0-405415-09/13/77-19-	16-7.9-	7.2-	800-	5-1-5-5-6-3-3-1-	-1-2-4-1-	-3-	-	-	-	-	3.73																						
56-44.0108-104.2097-2-07-	0-405416-09/14/77-10-	25-12.8-C-	8.0-	400-	10-1-1-5-7-3-3-2-2-	-4-2-4-1-	-3-	-	-	-	-	1.49																						
56-44.0144-104.1725-2-07-	0-405417-09/14/77-11-	24-11.0-C-	8.0-	2390-	13-1-4-5-4-3-3-1-2-	-1-2-4-1-	-1-	-	-	-	-	5.95																						

APPENDIX I-B

Listing of Field Data and Elemental Concentrations for Sediment Samples from the Gillette Quadrangle, Wyoming (Pages 42 through 109)

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 II for Code to Listings)

APPENDIX I-B. 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)	SCINTILLATOR (cd ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	SIBIRIAN 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																											
56-44.3108-105.2322-2-14						0-404023-03/27/76-14			2.0	0			5.2	80		6-1-7-5-6-1-3-3	-4-3-2-2	-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.90	
56-44.3644-105.2205-2-15						0-404025-03/27/76-15			10							6-1-7-4-7-1	-4-2-2-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
56-44.4136-105.2277-2-15						0-404013-03/28/76-11			5							9-1-7-4-7-1	-4-3-2-3	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
56-44.4405-105.2261-2-14						0-404014-03/28/76-12			5	11.0	0		6.6	3000		9-1-7-4-7-1-3-2	-4-3-2-3	-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	
56-44.3458-105.1122-2-14						0-404017-03/28/76-14			5	8.0			5.2	1800		6-1-6-4-6-1-2-2	-4-3-2-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20	
56-44.3911-105.1022-2-14						0-404019-03/28/76-15			5	2.0			6.3	1300		6-1-6-4-6-1-2-2	-4-3-2-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80	
56-44.4588-105.0050-2-96						0-404023-03/28/76-17			5							3-1-7-4-7-1	-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
56-44.3466-105.0447-2-12						0-404026-03/28/76-10			5	6.0			6.6	4200		9-1-7-4-7-2-2-2-3	-4-2-2-1	-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.70	
56-44.3894-105.0561-2-14						0-404027-03/28/76-11			5				5.2	800		12-1-6-4-6-1-3-1	-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.70	
56-44.3891-105.0061-2-14						0-404029-03/28/76-12			5	5.0			5.7	120		9-1-5-4-6-1-3-2	-4-2-3-3	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30	
56-44.3986-105.0105-2-14						0-404030-03/28/76-13			5	5.0			6.6	2500		15-1-6-4-6-1-2-2	-4-2-2-3	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
56-44.4369-105.0088-2-14						0-404031-03/28/76-14			5	6.0			5.5	350		12-1-6-4-6-1-3-2	-4-3-3-3	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	
56-44.4186-105.0450-2-14						0-404032-03/28/76-14			6	6.0			6.6	2000		19-1-6-4-6-1-3-1	-4-2-2-3	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30	
56-44.2644-105.0969-2-96						0-404034-03/30/76-8			7							16-1-6-4-6-1	-4-2-3-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
56-44.2486-105.0705-2-97						0-404039-03/30/76-9			7		0					9-1-7-5-8-1	-4-3-3-1	-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.70	
56-44.2300-105.1194-2-13						0-404042-03/30/76-12			7	7.0			5.5	130		9-1-6-4-6-1-2-4	-4-3-2-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.90	
56-44.2222-105.2136-2-13						0-404044-03/30/76-13			9	9.0			5.5	90		9-1-7-4-7-1-2-2	-4-3-2-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
56-44.2280-105.7016-2-13						0-404049-03/31/76-10			13	9.0			6.9	1800		6-1-6-4-6-1-3-2	-4-4-2-1	-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.90	
56-44.2902-105.1516-2-14						0-404052-03/27/76-10			9	2.0			5.9	2850		9-1-7-4-7-2-3-1	-4-3-1-3	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
56-44.3472-105.3461-2-14						0-404054-03/28/76-12			2	7.5			6.1	90		12-1-7-5-8-1-3-2	-4-2-2-5	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
56-44.3669-105.3494-2-14						0-404050-03/28/76-14			3	7.0			5.2	500		10-1-7-5-8-2-3-2	-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30	
56-44.4411-105.2966-2-14						0-404053-03/28/76-17			3	6.0			5.2	140		7-1-7-5-6-2-3-6	-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
56-44.4311-105.2691-2-15						0-404063-03/28/76-17			3							7-1-7-3-8-1	-4-3-2-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	
56-44.2819-105.5800-2-13						0-404069-04/05/76-9			12	10.0			6.1	1200		8-1-7-4-7-1-2-1	-4-3-2-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.20	
56-44.2733-105.6927-2-13						0-404070-04/05/76-10			13	10.0			6.5	1900		10-1-6-4-6-1-2-1	-4-3-2-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.80	
56-44.2944-105.7263-2-11						0-404071-04/05/76-11			13	9.0			5.9	1300		8-1-6-4-8-1-2-1	-4-3-2-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
56-44.2847-105.7119-2-13						0-404072-04/05/76-11			13	10.0			6.8	10000		13-1-6-4-6-1-2-1	-4-3-2-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.90	
56-44.7338-105.3233-2-14						0-404082-03/29/76-13			9	11.0			8.0	1200		1-1-7-5-7-1-2-2	-4-2-2-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
56-44.7325-105.2894-2-15						0-404093-03/29/76-14			12							9-1-6-4-7-1	-4-2-2-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.10	
56-44.7430-105.3130-2-14						0-404094-03/29/76-14			10	9.0	0		7.0	500		12-1-7-5-6-1-2-2	-4-2-1-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
56-44.6858-105.3563-2-14						0-404095-03/29/76-15			8	9.0	0		7.4	100		9-1-7-4-7-2-2-2	-4-3-2-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.80	
56-44.6522-105.3450-2-15						0-404097-03/29/76-16			0							18-1-7-4-7-1	-4-3-2-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.90	
56-44.6847-105.4241-2-14						0-404092-03/30/76-10			9	9.0			7.8	100		9-1-7-4-7-1-2-2	-4-3-2-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	
56-44.7144-105.4580-2-97						0-404096-03/30/76-12			14							12-1-7-4-7-1	-3-3-4-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.80	
56-44.7197-105.4761-2-11						0-404092-03/30/76-12			16	9.0			6.3	400		8-1-7-4-7-2-2-3	-3-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
56-44.7216-105.4872-2-15						0-404098-03/30/76-13			11							9-1-7-4-7-1	-3-2-3-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
56-44.6911-105.4927-2-11						0-404099-03/30/76-13			17	9.0			6.1	800		13-1-7-5-6-2-2-1	-1-3-4-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.90	
56-44.7027-105.4755-2-11						0-404100-03/30/76-14			11	10.0			7.4	5000		9-1-7-4-7-2-2-3	-4-3-2-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.90	
56-44.6894-105.4750-2-15						0-404101-03/30/76-15			15							9-1-7-4-7-1	-4-3-3-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.80	
56-44.7083-105.4661-2-96						0-404102-03/30/76-15			15							9-1-7-4-7-1	-4-3-2-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.40	
56-44.7100-105.4316-2-97						0-404103-03/30/76-15			15							12-1-7-4-7-1	-4-3-2-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
56-44.7261-105.4155-2-97						0-404104-03/30/76-15			12							15-1-7-4-6-1	-3-2-3-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.70	
56-44.8027-105.4916-2-14						0-404108-03/30/76-17			0	11.0			6.3	1900		12-1-7-4-7-1-2-1	-4-3-2-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
56-44.7975-105.4197-2-15						0-404109-03/30/76-17			9							12-1-7-4-7-1	-4-3-2-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
56-44.7769-105.2805-2-12						0-404112-03/31/76-8			12	6.0			6.0	800		6-1-7-1	-																		

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

2

DOE SAMPLE NUMBER						LAB SAMPLE LOCATION NUMBER	ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE										ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE		Concentrations reported in weight parts per million (ppm)										Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li	
56-44.3108-105.2322-2-14-						0-M04003	-5	-5	-5	15	-20	-15	17	-10	-15		1	19
56-44.3644-105.2265-2-15-						0-M04005	-5	-5	-5	27	-20	-15	9	-10	15		2	20
56-44.4136-105.2277-2-15-						0-M04013	-5	-5	-5	24	-20	-15	14	-10	-15		2	30
56-44.4405-105.2261-2-14-						0-M04014	-5	-5	-5	22	-20	-15	9	-10	-15		2	22
56-44.3458-105.1122-2-14-						0-M04017	-5	-5	-5	29	-20	19	7	-10	-15		2	36
56-44.3911-105.1022-2-14-						0-M04018	-5	-5	-5	17	-20	16	7	-10	-15		1	21
56-44.4588-105.0050-2-96-						0-M04023	-5	-5	-5	26	-20	-15	9	-10	-15		2	24
56-44.3466-105.0447-2-12-						0-M04024	-5	-5	-5	20	-20	-15	11	-10	-15		2	31
56-44.3894-105.0561-2-14-						0-M04027	-5	-5	-5	25	-20	16	10	-10	-15		2	29
56-44.3891-105.0061-2-14-						0-M04029	-5	-5	-5	16	-20	17	10	-10	-15		2	29
56-44.3986-105.0105-2-14-						0-M04030	-5	-5	-5	20	-20	-15	10	-10	-15		1	18
56-44.4369-105.0089-2-14-						0-M04031	-5	-5	-5	27	-20	24	16	-10	-15		3	41
56-44.4186-105.0450-2-14-						0-M04032	-5	-5	-5	26	-20	-15	9	-10	-15		2	33
56-44.2644-105.0969-2-96-						0-M04034	-5	-5	-5	23	-20	-15	13	-10	-15		1	25
56-44.2486-105.0705-2-97-						0-M04039	-5	-5	-5	15	-20	-15	13	-10	-15		2	22
56-44.2300-105.1194-2-13-						0-M04042	-5	-5	-5	18	-20	-15	10	-10	-15		2	30
56-44.2222-105.2136-2-13-						0-M04044	-5	-5	-5	19	-20	-15	12	-10	-15		2	18
56-44.7280-105.7016-2-13-						0-M04049	-5	-5	-5	22	-20	-15	15	-10	-15		2	37
56-44.2902-105.1516-2-14-						0-M04052	-5	-5	-5	25	-20	-15	18	-10	18		2	29
56-44.3472-105.7461-2-14-						0-M04054	-5	-5	-5	23	-20	-15	8	-10	-15		2	24
56-44.3569-105.3494-2-14-						0-M04060	-5	-5	-5	25	-20	-15	7	-10	-15		2	24
56-44.4411-105.2966-2-14-						0-M04062	-5	-5	-5	14	-20	-15	9	-10	-15		2	19
56-44.4311-105.2691-2-15-						0-M04063	-5	-5	-5	-10	-20	-15	5	-10	-15		1	18
56-44.2819-105.6800-2-13-						0-M04069	-5	-5	-5	30	-20	-15	17	-10	-15		2	33
56-44.2733-105.5927-2-13-						0-M04070	-5	-5	-5	25	-20	-15	10	-10	-15		2	29
56-44.2944-105.7263-2-11-						0-M04071	-5	-5	-5	20	-20	-15	12	-10	-15		2	33
56-44.2847-105.7119-2-13-						0-M04072	-5	-5	-5	21	-20	16	11	-10	-15		1	28
56-44.7338-105.3233-2-14-						0-M04082	-5	-5	-5	26	-20	-15	11	-10	-15		1	22
56-44.7325-105.2894-2-15-						0-M04083	-5	-5	-5	14	-20	21	8	-10	-15		-1	11
56-44.7430-105.3130-2-14-						0-M04084	-5	-5	-5	21	-20	-15	13	-10	-15		1	22
56-44.6859-105.3563-2-14-						0-M04085	-5	-5	-5	19	-20	19	14	-10	-15		2	18
56-44.6522-105.3450-2-15-						0-M04087	-5	-5	-5	17	-20	-15	5	-10	-15		1	16
56-44.6847-105.4241-2-14-						0-M04092	-5	-5	-5	31	-20	-15	10	-10	-15		3	33
56-44.7144-105.4580-2-97-						0-M04094	-5	-5	-5	27	-20	21	16	-10	-15		2	49
56-44.7197-105.4761-2-11-						0-M04097	-5	-5	-5	22	-20	16	16	-10	-15		3	37
56-44.7216-105.4872-2-15-						0-M04099	-5	-5	-5	23	-20	-15	7	-10	-15		2	20
56-44.6911-105.4927-2-11-						0-M04100	-5	-5	-5	21	-20	-15	13	-10	-15		2	29
56-44.7027-105.4755-2-11-						0-M04101	-5	-5	-5	34	-20	27	9	-10	-15		2	35
56-44.6894-105.4750-2-15-						0-M04101	-5	-5	-5	24	-20	20	17	-10	-15		2	24
56-44.7083-105.4661-2-96-						0-M04102	-5	-5	-5	25	-20	17	20	-10	-15		2	45
56-44.7100-105.4315-2-97-						0-M04103	-5	-5	-5	29	-20	-15	9	-10	-15		2	27
56-44.7261-105.4155-2-97-						0-M04104	-5	-5	-5	20	-20	23	12	-10	-15		1	21
56-44.8027-105.4916-2-14-						0-M04108	-5	-5	-5	24	-20	18	16	-10	-15		2	30
56-44.7975-105.4197-2-15-						0-M04109	-5	-5	-5	17	-20	-15	8	-10	-15		1	17
56-44.7769-105.2905-2-12-						0-M04112	-5	-5	-5	21	-20	18	9	-10	-15		2	28
56-44.7594-105.3788-2-97-						0-M04114	-5	-5	-5	21	-20	-15	13	-10	-15		2	29
56-44.8327-105.3852-2-15-						0-M04119	-5	-5	-5	14	-20	-15	11	-10	-15		1	14
56-44.8405-105.3655-2-14-						0-M04121	-5	-5	-5	12	-20	-15	7	-10	-15		1	22
56-44.8236-105.2808-2-14-						0-M04124	-5	-5	-5	18	-20	19	14	-10	-15		2	21
56-44.6747-105.6888-2-13-						0-M04136	-5	-5	-5	19	-20	-15	6	-10	-15		2	26
56-44.7569-105.6961-2-97-						0-M04137	-5	-5	-5	19	-20	-15	9	-10	-15		2	30

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	LAST 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
56-44.3108-105.2322-2-14-			0-404003				46550	-0.13	453	-470	52	-36	9.8	51	3.9	4	0.9	9563	10.5	13280	42	0.4
56-44.3644-105.2205-2-15-			0-404005				47130	-0.09	540	1718	46	-39	10.0	35	2.2	4	0.8	7095	9.0	12130	30	0.4
56-44.4136-105.2277-2-15-			0-404013				73630	-0.11	397	2851	57	-40	6.8	51	4.3	4	1.0	11430	7.1	14060	39	0.3
56-44.4405-105.2261-2-14-			0-404014				52690	-0.11	532	4120	56	-39	7.7	46	4.3	4	0.8	8684	8.1	13700	33	0.3
56-44.3458-105.1122-2-14-			0-404017				72260	-0.18	750	-557	68	-53	13.8	69	7.6	5	1.6	19470	5.6	19000	46	0.5
56-44.3911-105.1022-2-14-			0-404018				50900	-0.08	554	2439	50	-54	10.6	29	2.5	4	0.7	7799	7.4	15360	34	0.3
56-44.4588-105.0050-2-96-			0-404023				50690	-0.10	532	44350	51	-60	7.3	44	3.6	3	1.1	11630	7.4	14780	43	0.3
56-44.3466-105.0447-2-12-			0-404026				54640	-0.12	508	13550	55	-56	7.8	46	3.5	4	0.9	11430	4.7	18600	25	0.3
56-44.3894-105.0561-2-14-			0-404027				56600	-0.15	590	8026	54	63	12.2	50	5.3	4	1.2	15330	5.5	18570	39	0.4
56-44.3891-105.0061-2-14-			0-404029				52870	-0.09	516	6598	43	-49	11.8	34	2.7	4	0.8	9401	5.4	15810	28	0.2
56-44.3986-105.0105-2-14-			0-404030				43650	-0.08	460	10450	51	92	4.9	29	3.0	3	0.9	8952	6.8	17240	32	0.3
56-44.4369-105.0088-2-14-			0-404031				55160	-0.14	587	9439	74	-34	10.2	55	4.8	5	1.3	13530	5.4	20450	29	0.4
56-44.4186-105.0450-2-14-			0-404032				53220	-0.15	548	10490	56	83	12.4	48	4.7	4	1.2	14440	6.6	18120	-15	0.3
56-44.2644-105.0962-2-96-			0-404036				49780	-0.09	557	10880	47	-62	11.5	38	3.0	4	0.8	8485	5.2	18530	33	0.3
56-44.2486-105.0705-2-97-			0-404039				48870	-0.09	428	15490	58	-49	5.1	33	3.6	3	0.9	8789	9.2	17440	36	0.4
56-44.2300-105.1194-2-13-			0-404042				46180	-0.10	559	3834	59	-46	6.3	34	3.4	4	1.0	9346	8.0	15100	34	0.4
56-44.2222-105.2136-2-13-			0-404046				59680	-0.15	519	-622	48	-26	12.5	49	4.1	3	0.9	10590	5.8	13480	-16	0.3
56-44.7280-105.7016-2-13-			0-404048				71040	-0.12	519	5853	62	-59	14.0	46	4.5	5	1.0	11900	5.5	19930	40	0.3
56-44.2902-105.1516-2-14-			0-404052				79200	-0.12	477	4934	67	130	9.5	57	6.1	3	1.0	13710	7.4	15700	51	0.5
56-44.3472-105.3461-2-14-			0-404056				57080	-0.12	594	3635	62	-44	9.4	52	3.2	4	0.9	14370	6.3	15300	34	0.3
56-44.3662-105.3494-2-14-			0-404060				56920	-0.14	683	4333	65	36	11.6	54	4.3	4	1.1	15340	11.9	13670	42	0.4
56-44.4411-105.2966-2-14-			0-404062				45220	-0.08	503	1445	47	-48	9.5	42	2.2	4	0.8	7206	11.3	12720	29	0.4
56-44.4311-105.2691-2-15-			0-404063				48620	-0.10	1066	3048	65	-44	8.4	79	2.5	3	1.1	21880	15.6	13490	47	0.4
56-44.2819-105.6800-2-13-			0-404068				56690	-0.11	585	10160	65	58	7.7	45	3.9	4	1.0	11970	5.4	19160	42	0.4
56-44.2733-105.6927-2-13-			0-404070				52770	-0.15	547	12260	80	62	12.9	52	4.2	4	1.1	13590	9.9	15900	44	0.4
56-44.2344-105.7263-2-11-			0-404071				57490	-0.11	525	18920	55	-52	13.9	37	3.2	4	0.9	14390	5.5	16380	35	0.2
56-44.2847-105.7119-2-12-			0-404072				46000	-0.10	440	30200	56	-69	7.8	40	4.0	3	1.0	12990	7.9	14320	35	0.4
56-44.7338-105.3233-2-14-			0-404082				53880	-0.12	502	2132	53	-38	7.4	55	3.5	4	1.0	8759	9.3	16590	45	0.4
56-44.7325-105.2894-2-15-			0-404083				28420	-0.11	629	4425	79	-33	7.8	57	2.5	5	1.2	11620	36.8	10120	56	0.7
56-44.7430-105.3130-2-14-			0-404084				47560	-0.09	506	-528	42	-44	10.3	33	3.1	4	0.7	6821	6.5	14630	28	0.3
56-44.6858-105.3563-2-14-			0-404085				48890	-0.09	450	11660	71	-47	6.3	50	3.1	4	1.1	12170	14.9	13910	35	0.5
56-44.6522-105.3450-2-15-			0-404087				32600	-0.08	551	2361	49	-31	5.5	38	2.4	3	0.8	6985	9.6	11810	26	0.3
56-44.6847-105.4241-2-14-			0-404092				52830	-0.16	604	2966	59	-33	9.3	52	5.2	4	1.1	9948	6.9	14120	43	0.4
56-44.7144-105.4580-2-97-			0-404094				94360	-0.13	527	3431	54	-39	13.8	64	6.1	4	0.9	11270	3.8	14540	39	0.3
56-44.7197-105.4761-2-11-			0-404097				73730	-0.13	459	9789	59	-34	8.9	69	5.4	3	1.0	13670	6.4	12470	33	0.3
56-44.7216-105.4872-2-15-			0-404098				49090	-0.11	577	2854	54	-25	8.5	49	3.7	3	0.8	10720	10.0	12570	41	0.4
56-44.6911-105.4927-2-11-			0-404099				61700	-0.17	649	12380	53	-39	15.7	56	6.0	4	1.0	19840	8.1	13580	-16	0.4
56-44.7027-105.4755-2-11-			0-404100				62450	-0.11	574	13250	47	-53	13.1	48	4.2	4	0.8	11070	5.2	13770	27	0.2
56-44.6894-105.4750-2-15-			0-404101				54270	-0.06	602	4751	61	-30	7.1	51	3.9	4	1.2	19400	8.4	14170	26	0.4
56-44.7083-105.4661-2-96-			0-404102				98690	-0.16	528	2937	69	-35	9.9	71	5.7	4	1.0	12590	3.8	14680	45	0.3
56-44.7100-105.4316-2-97-			0-404103				49690	-0.20	596	4931	49	62	10.8	47	2.4	4	0.8	9661	8.5	15790	-32	0.4
56-44.7261-105.4155-2-97-			0-404104				48300	-0.23	566	2742	52	-42	5.7	37	2.9	4	1.0	10700	8.0	13440	-58	0.4
56-44.8027-105.4916-2-14-			0-404108				63330	-0.29	468	10240	55	-37	7.3	43	3.0	3	0.9	10180	7.7	15170	-69	0.4
56-44.7975-105.4197-2-15-			0-404109				34180	-0.25	534	1310	39	-31	7.8	31	2.0	3	0.9	8199	12.6	13740	-55	0.5
56-44.7769-105.2805-2-12-			0-404112				61140	-0.24	527	2774	56	-39	12.4	45	4.2	4	1.0	9630	7.3	15000	-39	0.3
56-44.7594-105.3788-2-97-			0-404114				58420	-0.28	583	5438	62	-49	7.8	60	3.7	4	1.1	13780	6.7	15880	-77	0.3
56-44.8327-105.3852-2-15-			0-404118				32970	-0.20	437	2049	48	-30	5.1	34	1.2	3	0.9	6775	10.4	12550	-48	0.3
56-44.8405-105.3655-2-14-			0-404121				38330	-0.29	525	1752	45	-37	9.1	34	2.6	4	0.8	6260	12.2	15110	-72	0.3
56-44.8236-105.2808-2-14-			0-404124				45520	-0.19	553	14620	48	60	10.2	39	2.4	4	0.7	9648	8.5	15630	-31	0.4
56-44.6747-105.6888-2-13-			0-404134				49650	-0.25	599	4027	61	-47	5.5	37	3.1	4	0.9	12280	6.5	17360	-72	0.3
56-44.7569-105.6961-2-97-			0-404137				56030	-0.30	528	77670	53	-67	7.3	40	2.5	3	0.8	11610	4.5	15610	-75	0.7

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

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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	
56-44.3108-105.2322-2-14-						0-404003	5821	60	2331	47	-4	5.8	5.1	-141	-1	-1	8.4	3175	54	3.0	-28	0.345
56-44.3544-105.2205-2-15-						0-404005	4591	94	2112	31	-3	4.3	3.0	-167	-1	-1	6.5	3038	55	3.3	44	0.523
56-44.4136-105.2277-2-15-						0-404013	9019	94	2540	54	-3	3.2	4.6	-160	-1	-1	9.6	3270	83	3.3	94	0.365
56-44.4405-105.2261-2-14-						0-404014	3243	124	2250	-13	-3	5.8	4.3	-172	-1	-1	9.5	3109	68	-2.0	-23	0.389
56-44.3458-105.1122-2-14-						0-404017	12420	250	3472	-32	-6	10.6	5.9	-230	-1	-1	11.8	3791	76	4.6	136	0.356
56-44.3911-105.1022-2-14-						0-404019	8609	155	4397	36	-3	4.2	3.4	-210	-1	-1	6.3	3158	54	-1.4	53	0.603
56-44.4588-105.0050-2-95-						0-404023	29993	444	3993	44	-3	5.1	5.1	-248	-1	-1	8.8	2314	58	4.7	-29	0.352
56-44.3466-105.0447-2-12-						0-404024	12333	431	3472	39	-4	5.7	3.9	-276	-1	-1	8.2	2736	60	3.4	58	0.573
56-44.3994-105.0561-2-14-						0-404027	13290	339	2459	-25	-5	3.0	4.4	-227	-1	-1	8.9	3028	62	-2.4	-37	0.303
56-44.3891-105.0061-2-14-						0-404029	10110	359	2253	29	-3	4.9	4.6	-262	-1	-1	7.2	3056	55	2.1	-35	0.458
56-44.3986-105.0105-2-14-						0-404030	11243	385	3432	38	-3	4.7	3.2	-235	-1	-1	6.9	2015	41	2.9	63	0.449
56-44.4369-105.0088-2-14-						0-404031	6350	144	1453	60	-5	8.0	5.4	-197	-1	-1	11.3	3763	80	3.9	-83	0.327
56-44.4186-105.0450-2-14-						0-404032	14900	245	3739	-27	-5	7.6	4.1	-217	-1	-1	9.5	3067	58	5.6	-34	0.347
56-44.2644-105.0969-2-26-						0-404036	12653	262	5433	38	-3	4.5	3.4	-246	-1	-1	7.7	2651	49	-1.5	60	0.442
56-44.2486-105.0705-2-27-						0-404039	11070	140	4430	45	-3	5.3	3.7	-170	-1	-1	8.1	2114	45	-1.5	-11	0.580
56-44.2300-105.1194-2-13-						0-404042	6565	264	3739	35	-3	4.8	4.4	-202	-1	-1	8.9	2763	50	3.6	21	0.326
56-44.2222-105.2136-2-13-						0-404046	6152	77	1017	51	-5	7.5	3.0	-151	-1	-1	9.3	3401	64	-2.4	51	0.323
56-44.7280-105.7016-2-13-						0-404049	16520	234	3741	64	-4	7.0	5.0	-260	-1	-1	12.1	3795	82	3.3	67	0.322
56-44.2902-105.1515-2-14-						0-404052	10220	219	2409	65	5	9.4	5.4	-207	-1	-1	11.1	3315	95	4.4	92	0.315
56-44.3472-105.3461-2-14-						0-404056	8631	179	2349	-21	-4	7.0	4.7	-194	-1	-1	8.4	3410	90	3.0	70	0.369
56-44.3669-105.3494-2-14-						0-404060	2567	211	2341	47	-5	8.2	4.3	-191	-1	-1	10.9	3630	79	-2.3	-64	0.303
56-44.4411-105.2956-2-14-						0-404062	5044	137	3527	31	-3	3.9	3.6	-188	-1	-1	6.5	3357	44	2.4	-18	0.523
56-44.4311-105.2491-2-15-						0-404063	5136	364	2462	37	-3	5.9	4.6	-208	-1	-1	10.3	3114	55	3.9	52	0.359
56-44.2819-105.6800-2-13-						0-404069	13910	182	1290	52	-4	6.5	4.5	-180	-1	-1	10.9	3372	87	3.5	-41	0.385
56-44.2733-105.6927-2-13-						0-404070	11523	194	1791	46	-5	7.7	4.4	-185	-1	-1	11.4	3389	74	3.3	75	0.421
56-44.2944-105.7263-2-11-						0-404071	16030	385	1936	30	-3	5.9	3.2	-238	-1	-1	8.6	3126	81	2.1	54	0.407
56-44.2847-105.7119-2-13-						0-404072	15923	603	4327	57	-3	5.9	4.4	434	-1	-1	9.6	2385	61	2.4	55	0.406
56-44.7338-105.3233-2-14-						0-404082	9613	120	2351	-17	-3	6.1	4.5	-169	-1	-1	10.1	3763	72	3.3	68	0.347
56-44.7325-105.2894-2-15-						0-404083	5214	245	1831	31	-3	5.3	4.4	-157	1	-1	14.1	4951	48	5.9	46	0.362
56-44.7430-105.3130-2-14-						0-404084	6010	99	2657	35	-3	4.6	2.8	-179	-1	-1	6.4	3408	58	2.4	41	0.469
56-44.6858-105.3563-2-14-						0-404085	9125	214	3249	46	-3	6.3	5.1	-181	-1	-1	11.2	2932	63	4.5	57	0.339
56-44.6522-105.3450-2-15-						0-404087	4213	127	2005	39	-2	3.6	3.7	-136	-1	-1	7.1	2646	43	2.8	54	0.408
56-44.6847-105.4241-2-14-						0-404092	8064	63	1699	-26	-5	8.9	3.5	-148	-1	-1	8.6	3520	85	-3.3	98	0.430
56-44.7144-105.4580-2-27-						0-404094	10330	122	1023	40	-4	10.0	4.2	-219	-1	-1	10.5	4851	136	3.9	66	0.457
56-44.7197-105.4761-2-11-						0-404097	10200	108	1010	65	-4	10.5	5.3	214	-1	-1	10.8	3492	156	3.6	85	0.296
56-44.7216-105.4872-2-15-						0-404099	6809	164	731	35	-3	6.1	4.5	-164	-1	-1	9.2	3214	86	2.2	88	0.380
56-44.6911-105.4927-2-11-						0-404092	13550	240	1701	49	-5	10.0	5.5	204	-1	-1	10.2	3410	111	5.4	-51	0.284
56-44.7027-105.4755-2-11-						0-404100	15860	283	2358	46	-4	6.9	3.6	-265	-1	-1	9.3	3344	90	3.7	-54	0.419
56-44.6894-105.4750-2-15-						0-404101	6874	145	1168	55	-1	7.9	5.2	-154	-1	-1	9.5	2685	87	3.0	68	0.295
56-44.7083-105.4661-2-96-						0-404102	10860	111	741	55	-5	10.4	5.6	-207	-1	-1	14.1	3947	131	4.5	-51	0.312
56-44.7100-105.4316-2-97-						0-404103	7211	201	2744	29	-6	5.3	6.4	-159	-1	-1	9.3	3361	70	3.5	40	0.366
56-44.7261-105.4155-2-97-						0-404104	5740	134	2838	42	-7	6.2	4.7	-178	-1	-1	8.6	2991	64	4.6	-29	0.314
56-44.8027-105.4914-2-14-						0-404108	8921	154	1474	40	-2	6.5	6.8	-169	-1	-1	9.2	3367	84	6.3	-36	0.348
56-44.7975-105.4197-2-15-						0-404109	3357	136	2327	-24	-8	4.7	-3.2	-138	-1	-1	8.6	2994	44	-3.6	-30	0.372
56-44.7769-105.2805-2-12-						0-404112	8911	171	2594	-21	-7	6.2	-2.7	-184	-1	-1	8.5	3658	81	4.8	54	0.471
56-44.7594-105.3788-2-97-						0-404114	8397	269	2440	-30	-9	8.1	3.8	-246	-1	-1	9.9	3008	77	6.3	92	0.293
56-44.8327-105.3352-2-15-						0-404118	3707	133	1697	-19	-6	3.1	-2.5	-127	-1	-1	6.8	2298	38	3.6	43	0.441
56-44.8405-105.3655-2-14-						0-404121	4973	92	3006	-28	-9	5.0	-3.7	-142	-1	-1	8.8	2953	48	5.5	-35	0.341
56-44.8236-105.2808-2-14-						0-404124	15400	261	3169	42	-6	4.7	5.1	-187	-1	-1	7.9	2934	53	3.6	41	0.405
56-44.6747-105.6889-2-13-						0-404136	10460	278	2558	46	-8	6.0	5.9	-238	-1	-1	8.7	2538	51	4.6	34	0.356
56-44.7569-105.6961-2-97-						0-404137	18990	513	3865	-30	-9	5.6	-3.7	760	-1	-1	8.7	2034	66	-3.7	63	0.322

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

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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 (dL/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																											
56-44.7855-105.6961-2-14-						0-M04140-04/01/76-10-			15-13.0-				6.6-	250-		16-1-6-4-6-1-3-2-		-4-2-3-1-	-1-																3.30
56-44.8316-105.8105-2-96-						0-M04144-04/01/76-12-			15-							12-1-6-4-6-	-1-	-4-3-4-1-	-1-																4.10
56-44.8444-105.7955-2-15-						0-M04145-04/01/76-12-			21-							6-1-6-4-6-	-1-	-4-2-4-1-	-1-																3.70
56-44.8555-105.8333-2-12-						0-M04147-04/01/76-13-			21-15.0-				6.9-	8000-		10-1-6-4-6-1-2-2-3-4-2-2-2-		-1-																	5.10
56-44.8669-105.8483-2-12-						0-M04149-04/01/76-13-			21-15.0-				7.0-	3200-		12-1-6-4-6-1-2-4-3-4-3-2-2-		-1-																	4.10
56-44.8419-105.8205-2-15-						0-M04149-04/01/76-14-			21-							15-1-6-4-6-	-1-	-4-3-4-2-	-1-																4.00
56-44.8491-105.3105-2-96-						0-M04152-03/31/76-15-			17-							9-1-7-4-7-	-1-	-4-2-2-1-	-1-																2.50
56-44.7072-105.3636-2-15-						0-M04153-03/31/76-14-			12-							12-1-7-4-7-	-1-	-4-3-2-1-	-1-																2.80
56-44.7594-105.5077-2-14-						0-M04154-04/02/76-10-			1-5.0-0-				6.3-	1200-		12-1-6-4-6-1-2-3-		-4-2-2-3-	-1-																3.00
56-44.7802-105.5705-2-15-						0-M04156-04/02/76-11-			1-							9-1-6-4-6-	-1-	-4-2-2-3-	-1-																4.50
56-44.7525-105.5322-2-15-						0-M04158-04/02/76-11-			3-							12-1-6-4-6-	-1-	-4-2-2-3-	-1-																3.10
56-44.8244-105.5569-2-14-						0-M04159-04/02/76-12-			4-5.0-				6.5-	3300-		9-1-6-4-6-1-2-1-		-4-2-2-3-	-1-																3.10
56-44.6775-105.5652-2-15-						0-M04145-04/03/76-11-			14-							12-1-7-4-6-	-1-	-4-3-2-1-	-9-																3.40
56-44.6694-105.5722-2-15-						0-M04144-04/03/76-11-			11-							15-1-7-4-6-	-1-	-4-3-2-1-	-9-																3.40
56-44.8250-105.7938-2-15-						0-M04159-04/01/76-14-			16-							19-1-6-4-6-	-1-	-4-2-4-2-	-1-																3.90
56-44.8005-105.8080-2-14-						0-M04170-04/01/76-15-			17-12.0-				6.3-	250-		12-1-6-	-1-	-1-2-3-	-4-3-2-2-	-1-															4.00
56-44.6569-105.6650-2-14-						0-M04172-04/03/76-11-			11-9.0-				6.5-	2000-		6-1-7-4-7-1-2-2-		-4-3-2-1-	-1-																3.60
56-44.6527-105.6963-2-13-						0-M04181-04/03/76-12-			17-9.0-				6.5-	6000-		12-1-6-4-6-1-3-2-		-4-3-2-1-	-1-																3.80
56-44.8347-105.6333-2-14-						0-M04185-04/03/76-14-			10-12.0-				6.1-	490-		9-1-6-4-6-1-2-2-		-4-2-3-1-	-1-																3.10
56-44.8325-105.6494-2-15-						0-M04186-04/03/76-14-			15-							6-1-6-4-6-	-1-	-4-3-2-1-	-1-																3.80
56-44.5183-105.6641-2-14-						0-M04192-04/04/76-			9-12.0-				6.8-	1600-		17-1-7-4-7-1-2-1-		-4-3-2-1-	-3-																2.90
56-44.8413-105.5215-2-15-						0-M04194-04/03/76-13-			13-							10-1-7-4-6-	-1-	-4-2-3-1-	-9-																3.80
56-44.8575-105.5416-2-15-						0-M04197-04/03/76-13-			11-							10-1-7-4-6-	-1-	-4-2-2-1-	-1-																3.70
56-44.8766-105.5572-2-97-						0-M04198-04/03/76-14-			11-							12-1-7-	-1-	-4-2-2-1-	-1-																3.00
56-44.9180-105.5116-2-15-						0-M04200-04/03/76-15-			11-							12-1-7-4-7-	-1-	-1-2-2-1-	-1-																3.10
56-44.9083-105.5716-2-12-						0-M04202-04/03/76-15-			14-							12-1-7-5-6-	-1-	-4-2-2-1-	-1-																3.40
56-44.9363-105.6172-2-15-						0-M04205-04/03/76-14-			12-							12-1-7-5-6-	-1-	-4-2-2-1-	-1-																3.80
56-44.9466-105.5916-2-15-						0-M04207-04/03/76-14-			13-							15-1-7-6-7-	-1-	-4-2-2-1-	-1-																4.30
56-44.8952-105.5255-2-15-						0-M04209-04/06/76-			8-20-							18-1-6-4-6-	-1-	-4-3-2-2-	-9-																4.10
56-44.9569-105.4883-2-15-						0-M04210-04/06/76-			8-14-							18-1-6-4-6-	-1-	-1-3-4-2-	-1-																5.40
56-44.9680-105.5277-2-15-						0-M04212-04/06/76-			9-16-							6-1-6-4-6-	-1-	-4-3-2-2-	-9-																3.00
56-44.9883-105.4847-2-15-						0-M04214-04/06/76-			9-10-							9-1-6-4-6-	-1-	-4-3-2-2-	-1-																2.80
56-44.5252-105.6786-2-97-						0-M04215-04/04/76-10-			20-							12-1-7-4-7-	-1-	-4-3-2-1-	-1-																3.70
56-44.5427-105.6713-2-14-						0-M04214-04/04/76-11-			16-10.0-0-				6.6-	1500-		16-1-6-4-6-1-2-1-		-4-3-2-1-	-1-																3.40
56-44.5372-105.7208-2-14-						0-M04217-04/04/76-11-			18-13.0-				6.3-	170-		16-1-6-4-6-1-3-3-		-4-3-2-1-	-1-																3.40
56-44.5163-105.7063-2-15-						0-M04219-04/04/76-12-			22-							16-1-6-4-6-	-1-	-3-2-3-1-	-1-																3.90
56-44.5580-105.6436-2-14-						0-M04221-04/04/76-13-			22-17.0-				5.5-	90-		9-1-6-4-6-1-2-1-		-3-2-2-1-	-1-																3.30
56-44.5644-105.7230-2-13-						0-M04222-04/04/76-14-			22-13.0-				6.6-	1700-		9-1-6-4-6-3-3-1-		-4-3-2-1-	-1-																3.10
56-44.2872-105.7883-2-13-						0-M04222-04/05/76-13-			13-14.0-				6.8-	4700-		10-1-6-4-6-1-2-1-		-4-3-2-1-	-1-																3.60
56-44.2983-105.8372-2-96-						0-M04230-04/05/76-14-			17-							13-1-7-4-7-	-1-	-4-3-2-1-	-1-																3.30
56-44.2827-105.8352-2-13-						0-M04231-04/05/76-14-			17-12.0-				6.8-	1900-		8-1-6-4-6-1-2-1-		-4-3-2-1-	-1-																3.00
56-44.1327-105.6505-2-14-						0-M04243-04/03/76-11-			11-5.0-0-				6.0-	320-		6-1-6-4-6-1-2-1-		-4-2-2-1-	-1-																3.00
56-44.1902-105.7227-2-14-						0-M04247-04/03/76-13-			10-13.0-				6.3-	3000-		12-1-6-4-6-1-2-1-		-4-2-3-1-	-1-																3.70
56-44.2055-105.6536-2-14-						0-M04249-04/03/76-14-			17-9.0-0-				6.3-	800-		12-1-6-4-6-1-2-1-		-4-3-3-1-	-1-																3.30
56-44.2222-105.7369-2-14-						0-M04251-04/03/76-16-			10-14.0-0-				6.6-	1200-		16-1-6-4-6-1-2-1-		-4-3-4-1-	-1-																6.00
56-44.9872-105.4166-2-15-						0-M04281-04/06/76-10-			18-							13-1-6-4-6-	-1-	-4-3-2-2-	-1-																5.00
56-44.9861-105.3930-2-97-						0-M04283-04/06/76-11-			22-							9-1-6-4-6-	-1-	-4-3-2-2-	-1-																3.50
56-44.9833-105.3444-2-96-						0-M04285-04/06/76-11-			22-																										

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	LAS. 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
56-44.7855-105.6961-2-14-	0-W04140	-5	-5	-5	24	-20	-15	7	-10	-15	2	34				
56-44.8316-105.8105-2-25-	0-W04144	-5	-5	-5	27	-20	34	11	-10	-15	3	36				
56-44.8444-105.7955-2-15-	0-W04145	-5	-5	-5	19	-20	-15	11	-10	-15	2	30				
56-44.8555-105.8333-2-12-	0-W04147	-5	-5	-5	33	-20	32	8	-10	-15	2	40				
56-44.8669-105.8483-2-12-	0-W04148	-5	-5	-5	26	-20	26	10	-10	-15	2	44				
56-44.8419-105.8205-2-15-	0-W04149	-5	-5	-5	15	-20	-15	5	-10	-15	2	31				
56-44.8491-105.3105-2-26-	0-W04152	-5	-5	-5	12	-20	-15	5	-10	-15	2	23				
56-44.7072-105.3536-2-15-	0-W04153	-5	-5	-5	16	-20	-15	-5	-10	-15	1	16				
56-44.7594-105.5077-2-14-	0-W04154	-5	-5	-5	22	-20	-15	9	-10	-15	1	27				
56-44.7802-105.5705-2-15-	0-W04156	-5	-5	-5	24	-20	17	8	-10	-15	1	36				
56-44.7525-105.5322-2-15-	0-W04158	-5	-5	-5	22	-20	18	7	-10	-15	2	28				
56-44.8244-105.5569-2-14-	0-W04160	-5	-5	-5	25	-20	20	11	-10	-15	2	24				
56-44.6775-105.5652-2-15-	0-W04165	-5	-5	-5	22	-20	-15	8	-10	17	2	23				
56-44.6694-105.5722-2-15-	0-W04166	-5	-5	-5	17	-20	-15	7	-10	-15	2	15				
56-44.8250-105.7938-2-15-	0-W04169	-5	-5	-5	26	-20	18	9	-10	-15	2	30				
56-44.8005-105.8080-2-14-	0-W04170	-5	6	-5	31	-20	15	10	-10	21	2	43				
56-44.6669-105.6650-2-14-	0-W04170	-5	-5	-5	30	-20	18	6	-10	-15	2	40				
56-44.6527-105.6963-2-13-	0-W04181	-5	-5	-5	22	-20	-15	10	-10	-15	2	48				
56-44.8347-105.5333-2-14-	0-W04185	-5	-5	-5	20	-20	22	14	-10	-15	2	37				
56-44.8325-105.6494-2-15-	0-W04186	-5	-5	-5	43	-20	19	14	-10	15	2	42				
56-44.5183-105.6641-2-14-	0-W04193	-5	-5	-5	25	-20	-15	10	-10	-15	2	35				
56-44.8413-105.5216-2-15-	0-W04196	-5	-5	-5	23	-20	23	19	-10	-15	2	33				
56-44.8575-105.5416-2-15-	0-W04197	-5	-5	-5	32	-20	-15	15	-10	-15	2	47				
56-44.8766-105.5572-2-27-	0-W04199	-5	-5	-5	25	-20	-15	11	-10	-15	2	29				
56-44.9180-105.5116-2-15-	0-W04200	-5	-5	-5	25	-20	-15	14	-10	-15	1	27				
56-44.9083-105.5716-2-12-	0-W04202	-5	-5	-5	27	-20	-15	11	-10	-15	2	36				
56-44.9363-105.5172-2-15-	0-W04205	-5	-5	-5	21	-20	-15	10	-10	-15	2	38				
56-44.9466-105.5916-2-15-	0-W04207	-5	-5	-5	36	-20	15	11	-10	-15	2	38				
56-44.8952-105.5255-2-15-	0-W04209	-5	-5	-5	28	-20	-15	12	-10	-15	2	37				
56-44.9569-105.4883-2-15-	0-W04210	-5	-5	-5	25	-20	-15	13	-10	-15	2	34				
56-44.9680-105.5277-2-15-	0-W04212	-5	-5	-5	31	-20	-15	-5	-10	-15	2	31				
56-44.9583-105.4847-2-15-	0-W04214	-5	-5	-5	20	-20	16	7	-10	-15	2	32				
56-44.5252-105.5786-2-27-	0-W04215	-5	-5	-5	29	-20	-15	9	-10	-15	2	38				
56-44.5427-105.6713-2-14-	0-W04216	-5	-5	-5	24	-20	-15	6	-10	-15	2	28				
56-44.5372-105.7208-2-14-	0-W04217	-5	-5	-5	16	-20	-15	6	-10	-15	2	29				
56-44.5163-105.7263-2-15-	0-W04219	-5	-5	-5	34	-20	-15	12	-10	-15	2	37				
56-44.5580-105.6435-2-14-	0-W04221	-5	-5	-5	30	-20	-15	21	-10	-15	2	30				
56-44.5644-105.7230-2-13-	0-W04222	-5	-5	-5	21	-20	-15	11	-10	-15	2	34				
56-44.2872-105.7883-2-13-	0-W04228	-5	-5	-5	14	-20	-15	14	-10	-15	2	36				
56-44.2983-105.8372-2-26-	0-W04230	-5	-5	-5	19	-20	-15	-5	-10	-15	2	39				
56-44.2827-105.8352-2-13-	0-W04231	-5	-5	-5	28	-20	-15	5	-10	-15	2	36				
56-44.1327-105.6505-2-14-	0-W04242	-5	-5	-5	13	-20	-15	12	-10	-15	2	35				
56-44.1902-105.7227-2-14-	0-W04247	-5	-5	-5	19	-20	-15	9	-10	-15	2	46				
56-44.2055-105.6536-2-14-	0-W04249	-5	-5	-5	16	-20	16	7	-10	-15	1	32				
56-44.2222-105.7369-2-14-	0-W04251	-5	-5	-5	25	-20	29	11	-10	-15	2	47				
56-44.9872-105.4166-2-15-	0-W04281	-5	-5	-5	23	-20	21	13	-10	-15	2	33				
56-44.9861-105.3930-2-27-	0-W04282	-5	-5	-5	25	-20	21	14	-10	-15	2	45				
56-44.9333-105.3444-2-26-	0-W04285	-5	-5	-5	12	-20	-15	11	-10	-15	1	23				
56-44.9344-105.3166-2-15-	0-W04293	-5	-5	-5	17	-20	-15	11	-10	-15	2	17				
56-44.9369-105.3905-2-27-	0-W04297	-5	-5	-5	31	-20	-15	10	-10	-15	2	33				
56-44.9230-105.3952-2-15-	0-W04298	-5	7	-5	21	-20	18	14	-10	-15	2	27				

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
56-44.7855-105.6961-2-14-	0-M04143	61700	-0.36	573	11910	63	72	11.7	52	4.7	5	1.2	14280	6.6	20410	-61	0.4					
56-44.8314-105.8165-2-34-	0-M04144	84190	-0.32	702	14500	62	-56	17.9	67	5.0	4	1.0	18830	3.2	21700	-41	0.3					
56-44.8444-105.7955-2-15-	0-M04145	54770	-0.24	569	11950	67	-60	7.3	41	3.2	4	1.2	13850	8.3	15310	-65	0.5					
56-44.8555-105.8333-2-12-	0-M04147	64610	-0.34	403	26060	62	-88	9.3	50	3.5	3	1.1	19440	4.7	12470	-80	0.3					
56-44.8659-105.8483-2-12-	0-M04148	50120	-0.41	626	18130	53	-57	15.0	48	4.6	4	1.0	16670	5.6	17040	-96	0.5					
56-44.8419-105.8265-2-15-	0-M04147	51460	-0.21	515	8902	66	-53	10.9	38	2.5	5	1.0	10620	11.1	16300	-29	0.4					
56-44.8491-105.3105-2-34-	0-M04152	47730	-0.23	529	1185	57	-53	5.7	36	3.8	4	0.9	10670	7.0	14560	-64	0.3					
56-44.7072-105.3635-2-15-	0-M04153	41640	-0.08	528	2428	49	-35	6.5	36	2.8	3	1.2	9938	7.9	14670	34	0.3					
56-44.7594-105.5077-2-14-	0-M04154	43300	-0.06	577	4192	44	-43	10.6	34	2.7	4	0.8	8270	9.5	15200	27	0.3					
56-44.7802-105.5705-2-15-	0-M04155	57880	-0.09	554	12790	57	-59	10.0	46	4.0	4	1.0	15250	4.8	14510	32	0.2					
56-44.7525-105.5322-2-15-	0-M04153	64820	-0.09	630	15320	63	-57	11.9	54	3.1	4	1.0	13930	5.7	17450	34	0.3					
56-44.8244-105.5569-2-14-	0-M04160	57270	-0.11	454	12640	53	-51	13.9	55	-1.9	3	1.0	13800	7.4	17270	43	0.3					
56-44.6775-105.5652-2-15-	0-M04165	47120	-0.06	578	4337	44	-39	10.5	33	2.5	4	0.8	8524	7.4	14770	23	0.4					
56-44.6694-105.5722-2-15-	0-M04166	44400	-0.07	587	4735	62	-44	7.0	39	2.8	5	1.1	10700	8.5	14830	38	0.3					
56-44.8250-105.7938-2-15-	0-M04162	44360	-0.07	485	12690	65	141	8.8	40	2.6	4	1.0	11590	7.0	13740	34	0.3					
56-44.8005-105.8080-2-14-	0-M04170	71510	-0.12	533	13520	72	-56	13.8	66	5.9	4	1.4	14810	7.7	16480	62	0.4					
56-44.6669-105.5650-2-14-	0-M04179	64370	-0.08	634	6012	59	-47	14.2	41	3.5	5	0.9	11280	4.7	18910	26	0.3					
56-44.6527-105.6963-2-13-	0-M04181	81790	-0.09	574	23340	62	-42	6.5	70	6.2	4	1.0	11150	5.2	15330	35	0.3					
56-44.8347-105.6333-2-14-	0-M04185	62420	-0.09	732	28420	57	-67	9.9	59	3.6	4	0.9	14630	7.0	16260	32	0.4					
56-44.8325-105.6494-2-15-	0-M04186	82130	-0.13	617	18450	68	-62	16.1	69	6.1	3	1.2	22510	4.2	17580	40	0.3					
56-44.5183-105.6641-2-14-	0-M04193	59090	-0.07	588	12670	49	-44	12.7	41	3.6	4	0.8	12300	4.4	17190	31	0.3					
56-44.8413-105.5215-2-15-	0-M04196	64750	-0.08	657	3366	54	-35	11.6	70	4.9	4	1.0	20780	6.7	12050	34	0.4					
56-44.8575-105.5416-2-15-	0-M04197	82000	-0.09	585	5438	60	-40	9.5	61	5.7	4	0.8	15110	4.3	14810	28	0.3					
56-44.8766-105.5572-2-37-	0-M04199	49310	-0.09	529	3990	58	-37	12.3	52	2.9	3	1.0	13170	8.7	15190	42	0.3					
56-44.9180-105.5116-2-15-	0-M04200	41280	-0.05	558	3574	43	43	10.2	31	2.0	4	0.8	7583	8.6	14400	26	0.3					
56-44.9083-105.5715-2-12-	0-M04202	59300	-0.08	580	3700	60	-45	5.2	56	4.8	4	1.1	10600	5.4	17940	32	0.3					
56-44.9363-105.6172-2-15-	0-M04205	47110	-0.07	545	22340	60	-57	7.5	28	2.7	4	1.0	10640	8.5	17380	31	0.5					
56-44.9465-105.5915-2-15-	0-M04207	41090	-0.10	530	2624	65	-44	13.5	45	4.6	4	1.1	14720	8.2	15520	49	0.3					
56-44.8952-105.5255-2-15-	0-M04209	58190	-0.07	597	4079	61	-29	12.7	39	3.5	4	0.9	11730	6.0	12680	31	0.3					
56-44.9569-105.4883-2-15-	0-M04210	74680	-0.08	536	10180	73	-34	7.2	66	5.4	5	1.1	12490	5.6	16960	41	0.3					
56-44.9680-105.5277-2-15-	0-M04212	56030	-0.08	586	2119	56	-46	7.0	42	3.3	4	0.9	10950	6.1	17310	32	0.4					
56-44.9883-105.4847-2-15-	0-M04214	50090	-0.08	434	3912	49	-38	9.6	44	2.9	3	1.0	10960	8.3	14130	34	0.4					
56-44.5252-105.6786-2-37-	0-M04215	62250	-0.08	562	11280	54	-49	14.2	44	3.3	5	0.9	12240	3.9	16950	30	0.3					
56-44.5427-105.6713-2-14-	0-M04216	46210	-0.07	662	6336	77	-44	5.9	44	2.3	5	1.1	11730	14.4	15220	44	0.5					
56-44.5372-105.7208-2-14-	0-M04217	58130	-0.08	543	7298	63	68	8.1	43	3.0	4	1.0	12370	8.5	17120	36	0.4					
56-44.5163-105.7063-2-15-	0-M04219	65940	-0.11	480	15210	60	-39	12.5	49	4.5	4	1.2	17270	5.5	18660	45	0.3					
56-44.5580-105.6435-2-14-	0-M04221	51910	-0.07	580	2889	51	-36	12.2	37	3.2	4	0.8	10270	6.2	17180	31	0.3					
56-44.5644-105.7230-2-13-	0-M04223	54150	-0.08	645	4564	67	-41	7.2	44	4.1	4	1.0	14500	7.3	19030	36	0.3					
56-44.2872-105.7883-2-13-	0-M04228	56080	-0.08	543	17130	65	-53	8.4	47	3.4	4	1.0	12580	6.4	16290	35	0.4					
56-44.2983-105.8372-2-36-	0-M04230	66110	-0.11	530	4991	68	-47	12.5	54	5.4	4	1.2	16490	6.0	19160	43	0.4					
56-44.2827-105.8352-2-13-	0-M04231	49810	-0.07	571	21470	55	-50	11.8	32	3.0	4	0.9	11050	6.5	16830	30	0.3					
56-44.1327-105.5505-2-14-	0-M04243	48450	-0.06	539	22070	63	-39	6.7	46	3.6	4	1.2	18940	6.3	16860	30	0.3					
56-44.1902-105.7227-2-14-	0-M04247	61970	-0.07	544	41050	58	-59	8.2	63	5.3	4	1.3	24640	5.8	16440	34	0.3					
56-44.2055-105.6536-2-14-	0-M04249	42790	-0.06	424	25840	72	-49	5.6	34	2.1	4	1.5	14440	16.8	13240	32	0.4					
56-44.2222-105.7369-2-14-	0-M04251	75520	-0.08	543	23090	81	-42	7.9	58	5.9	4	1.3	30310	5.2	18670	43	0.4					
56-44.9872-105.4166-2-15-	0-M04281	62370	-0.06	443	55090	59	-61	5.3	47	3.7	3	1.1	18720	5.8	14170	28	0.3					
56-44.9861-105.3930-2-37-	0-M04283	77770	-0.07	524	7230	78	-51	9.6	66	6.3	4	1.5	25400	6.5	19110	37	0.3					
56-44.9833-105.3444-2-36-	0-M04285	36700	-0.05	569	6301	50	-38	3.4	44	2.0	3	1.2	10890	12.2	13310	27	0.3					
56-44.9344-105.3165-2-15-	0-M04293	37880	-0.04	445	11160	61	-48	3.9	44	2.5	4	1.2	11830	14.2	13510	29	0.4					
56-44.9369-105.3905-2-37-	0-M04297	63980	-0.06	519	5293	62	-40	6.2	62	4.6	4	1.2	17500	6.3	15600	29	0.3					
56-44.9230-105.3952-2-15-	0-M04298	58090	-0.05	490	20010	60	-51	7.9	61	5.1	4	1.3	21900	11.9	13340	38	0.5					

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

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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		
56-44.7855-105.6951-2-14-	Q-W04147	20320	144	4407	95	-12	9.0	-4.1	-187	-1	-1	11.2	3641	69	6.0	77	0.295						
56-44.8316-105.8105-2-26-	Q-W04144	23522	449	3101	58	-10	10.0	5.8	-293	-1	-1	12.3	3938	118	6.8	97	0.333						
56-44.8444-105.7955-2-15-	Q-W04145	13672	279	5172	67	-7	7.2	6.1	-236	-1	-1	9.8	3019	67	-4.0	87	0.378						
56-44.8555-105.8333-2-12-	Q-W04147	23680	791	8445	-23	-10	7.5	5.8	-352	-1	-1	8.7	2415	90	7.8	32	0.586						
56-44.8669-105.8483-2-12-	Q-W04148	13070	362	4254	63	-12	8.8	-4.6	-269	-1	-1	9.1	3443	77	-5.6	-47	0.451						
56-44.8419-105.8205-2-15-	Q-W04149	15320	308	5027	39	-6	5.6	5.5	-211			1	9.1	3310	64	-3.0	51	0.440					
56-44.8491-105.3105-2-96-	Q-W04152	7242	278	4082	37	-7	5.5	4.4	-244	-1	-1	8.3	2473	47	5.0	59	0.301						
56-44.7072-105.3535-2-15-	Q-W04153	5062	118	2154	53	-2	5.2	3.4	-140	-1	-1	7.4	2269	54	2.8	54	0.378						
56-44.7594-105.5077-2-14-	Q-W04154	7389	202	2367	-15	-2	4.5	3.7	-192			-1	7.7	2988	55	2.2	-24	0.390					
56-44.7802-105.5705-2-15-	Q-W04154	21080	712	2565	41	-3	7.8	4.0	-357	-1	-1	8.9	3103	73	3.6	97	0.506						
56-44.7525-105.5322-2-15-	Q-W04158	18740	427	3044	48	-3	7.7	5.4	-311	-1	-1	10.1	2965	87	3.1	80	0.307						
56-44.8244-105.5569-2-14-	Q-W04158	11570	394	3048	-29	-3	7.7	4.0	-262	-1	-1	9.9	2966	74	3.6	50	0.313						
56-44.8005-105.5652-2-15-	Q-W04158	7828	239	2527	36	-2	4.9	4.1	183			-1	8.2	2797	65	2.4	75	0.415					
56-44.6694-105.5722-2-15-	Q-W04164	5736	272	3406	38	-2	5.9	4.2	-203	-1	-1	10.3	2616	52	3.3	57	0.330						
56-44.8250-105.7938-2-15-	Q-W04160	15157	312	4505	-17	-2	5.3	5.1	-246	-1	-1	8.8	2547	62	3.3	65	0.443						
56-44.8005-105.8080-2-14-	Q-W04170	12330	269	2863	68	-4	10.0	5.4	-226	-1	-1	12.5	2839	101	4.1	-41	0.320						
56-44.6669-105.6650-2-14-	Q-W04170	15392	193	2469	43	-2	7.0	3.5	-203	-1	-1	8.9	3478	76	2.0	85	0.404						
56-44.6527-105.6963-2-13-	Q-W04181	19280	223	1429	40	-3	10.5	3.6	196	-1	-1	13.0	4346	138	3.0	-79	0.292						
56-44.8347-105.6333-2-14-	Q-W04195	18830	492	4599	54	-3	7.6	4.9	-312	-1	-1	8.2	3342	88	3.7	106	0.378						
56-44.8325-105.6494-2-15-	Q-W04196	23522	452	4016	-32	-4	12.4	4.0	-273	-1	-1	11.1	3055	118	4.9	-90	0.342						
56-44.5183-105.6641-2-14-	Q-W04192	13910	205	2578	-19	-2	6.2	4.2	-226	-1	-1	8.5	3272	81	2.1	-57	0.341						
56-44.8413-105.5216-2-15-	Q-W04196	10662	262	1487	44	-3	9.5	3.7	-202	-1	-1	9.4	3661	122	3.2	83	0.404						
56-44.8575-105.5416-2-15-	Q-W04197	12060	212	1175	61	-3	9.7	3.7	-223	-1	-1	9.8	4397	131	2.6	102	0.378						
56-44.8766-105.5572-2-97-	Q-W04198	5508	250	1724	-24	-3	7.2	4.3	-184	-1	-1	10.1	2638	70	3.9	100	0.297						
56-44.9180-105.6116-2-15-	Q-W04200	7053	185	1901	30	-2	4.4	2.8	-156			-1	7.0	2634	62	2.4	38	0.443					
56-44.9083-105.5716-2-12-	Q-W04202	9877	128	2465	-21	-3	7.9	4.2	-194	-1	-1	10.2	3473	74	-1.6	106	0.333						
56-44.9363-105.6172-2-15-	Q-W04205	19860	302	4599	46	-2	5.1	5.1	-240	-1	-1	8.1	2570	49	2.4	-40	0.469						
56-44.9466-105.5916-2-15-	Q-W04207	9373	290	2499	55	-3	8.5	5.5	-202	-1	-1	11.9	2704	86	4.5	-103	0.361						
56-44.8952-105.5255-2-15-	Q-W04209	7556	230	1130	33	-2	6.7	4.4	-186	-1	-1	9.2	3573	100	2.2	87	0.446						
56-44.9569-105.4883-2-15-	Q-W04210	13060	120	1449	56	-3	10.3	5.4	-173	-1	-1	12.9	3546	103	4.1	83	0.419						
56-44.9680-105.5277-2-15-	Q-W04212	6847	173	2752	21	-2	6.0	4.7	-212	-1	-1	8.9	2987	66	3.2	76	0.337						
56-44.9883-105.4847-2-15-	Q-W04214	7466	186	2483	44	-3	6.3	3.6	-155	-1	-1	8.0	2668	64	3.3	33	0.350						
56-44.5252-105.5786-2-97-	Q-W04215	13590	295	2971	40	-2	6.8	3.8	-241	-1	-1	10.0	3200	84	2.1	98	0.370						
56-44.5427-105.5713-2-14-	Q-W04216	7433	336	3298	34	-2	5.8	5.5	-212	-1	-1	12.7	2870	54	3.9	69	0.268						
56-44.5372-105.7208-2-14-	Q-W04217	11370	247	2535	40	-2	6.2	5.1	-260	-1	-1	11.6	3279	70	3.5	101	0.293						
56-44.5163-105.7063-2-15-	Q-W04219	14180	334	1151	53	-3	9.1	4.9	-219	-1	-1	11.8	2994	89	3.3	87	0.331						
56-44.5580-105.6436-2-14-	Q-W04221	3643	259	1479	30	-2	5.5	4.0	-202	-1	-1	8.8	3367	71	2.5	59	0.375						
56-44.5644-105.7230-2-13-	Q-W04223	9830	333	1847	59	-3	6.9	4.8	-224	-1	-1	10.8	2735	73	3.1	71	0.287						
56-44.2872-105.7883-2-13-	Q-W04228	15910	417	2345	42	-3	6.1	5.2	-282	-1	-1	11.4	2962	69	2.9	-56	0.316						
56-44.2983-105.8372-2-96-	Q-W04230	10770	284	2804	-27	-3	8.8	4.2	-212	-1	-1	10.4	3021	76	3.5	-53	0.317						
56-44.2827-105.8352-2-13-	Q-W04231	10940	453	2633	27	-2	5.2	3.3	252	-1	-1	8.0	2908	62	1.7	54	0.375						
56-44.1327-105.6505-2-14-	Q-W04243	16130	343	1464	76	-1	6.2	4.6	-215	-1	-1	8.9	2541	62	2.3	38	0.337						
56-44.1902-105.7227-2-14-	Q-W04247	19740	351	2617	-30	-2	8.3	4.6	497	-1	-1	11.9	3268	77	3.0	-98	0.311						
56-44.2055-105.6535-2-14-	Q-W04249	6214	232	3239	-25	-1	4.6	5.7	-185	-1	-1	10.5	2335	52	3.5	-11	0.314						
56-44.2222-105.7369-2-14-	Q-W04251	19670	307	1425	73	-2	10.3	5.2	-244	-1	-1	14.3	3215	94	3.0	-20	0.420						
56-44.9872-105.4166-2-15-	Q-W04281	12250	487	2361	41	-2	5.2	4.1	-299	-1	-1	9.0	2744	66	1.9	-65	0.556						
56-44.9861-105.3930-2-97-	Q-W04283	14890	222	3390	89	-2	10.8	5.3	-203	-1	-1	11.6	3391	113	3.9	95	0.302						
56-44.9833-105.3444-2-96-	Q-W04285	8724	125	3211	53	-1	4.1	4.5	-153	-1	-1	9.0	2738	45	2.9		0.322						
56-44.9344-105.3166-2-15-	Q-W04293	13240	234	5257	54	-1	4.7	4.6	-182	-1	-1	7.9	2923	40	3.7	26	0.380						
56-44.9369-105.3905-2-97-	Q-W04297	10440	164	2185	92	-1	8.0	4.6	-188	-1	-1	11.1	3214	90	2.2	-68	0.297						
56-44.9230-105.3952-2-15-	Q-W04298	15120	273	3177	62	-1	7.9	4.8	-207			1	11.7	2668	76	3.1	-65	0.325					

[illegible]

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

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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	
56-44.7800-105.8233-2-12-						0-404300	-5	-5	-5	26	-20	22	10	-10	-15	2	32	
56-44.8011-105.8469-2-15-						0-404302	-5	-5	-5	25	-20	-15	-5	-10	-15	2	37	
56-44.7702-105.8147-2-14-						0-404303	-5	-5	-5	35	-20	17	13	-10	-15	3	40	
56-44.6711-105.8505-2-13-						0-404315	-5	-5	-5	22	-20	20	16	-10	-15	2	41	
56-44.5927-105.9005-2-15-						0-404320	-5	-5	-5	44	-20	19	12	-10	-15	2	28	
56-44.9205-105.4352-2-97-						0-404322	-5	-5	-5	21	-20	-15	7	-10	-15	1	21	
56-44.8883-105.6691-2-15-						0-404326	-5	-5	-5	24	-20	17	13	-10	-15	2	29	
56-44.9141-105.6625-2-97-						0-404327	-5	-5	-5	26	-20	-15	5	-10	-15	2	28	
56-44.9686-105.6777-2-15-						0-404329	-5	-5	-5	40	-20	27	18	-10	-15	2	41	
56-44.9263-105.6525-2-15-						0-404332	-5	-5	-5	29	-20	26	12	-10	-15	2	43	
56-44.8788-105.6938-2-15-						0-404333	-5	-5	-5	26	-20	-15	10	-10	-15	2	34	
56-44.3166-105.4438-2-15-						0-404342	-5	-5	-5	49	-20	32	22	-10	-15	2	33	
56-44.3136-105.6669-2-14-						0-404349	-5	-5	-5	25	-20	-15	8	-10	-15	2	32	
56-44.3244-105.7063-2-14-						0-404349	-5	-5	-5	31	-20	19	17	-10	-15	2	30	
56-44.3194-105.8015-2-14-						0-404350	-5	-5	-5	31	-20	-15	10	-10	-15	2	23	
56-44.3327-105.7808-2-14-						0-404351	-5	-5	-5	32	-20	23	15	-10	-15	2	27	
56-44.3469-105.7294-2-11-						0-404356	-5	-5	-5	31	-20	-15	15	-10	-15	2	30	
56-44.2905-105.6338-2-14-						0-404357	-5	-5	-5	35	-20	-15	21	-10	-15	2	33	
56-44.0083-105.7265-2-14-						0-404362	-5	-5	-5	25	-20	23	9	-10	-15	2	34	
56-44.0663-105.7105-2-14-						0-404362	-5	-5	-5	29	-20	23	14	-10	-15	2	34	
56-44.0761-105.5916-2-15-						0-404372	-5	-5	-5	25	-20	33	7	-10	-15	2	26	
56-44.0877-105.5922-2-12-						0-404379	-5	-5	-5	20	-20	-15	13	-10	-15	2	34	
56-44.1633-105.5394-2-96-						0-404381	-5	-5	-5	29	-20	21	11	-10	-15	2	26	
56-44.4872-105.6033-2-97-						0-404389	-5	-5	-5	24	-20	29	11	-10	-15	2	22	
56-44.3758-105.4583-2-11-						0-404390	-5	-5	-5	16	-20	-15	14	-10	-15	2	22	
56-44.4019-105.3813-2-11-						0-404391	-5	-5	-5	28	-20	-15	12	-10	-15	2	26	
56-44.4430-105.3847-2-11-						0-404392	-5	-5	-5	23	-20	-15	-5	-10	-15	2	16	
56-44.4555-105.4100-2-11-						0-404392	-5	-5	-5	18	-20	-15	13	-10	-15	2	17	
56-44.4738-105.3463-2-15-						0-404396	-5	-5	-5	23	-20	-15	8	-10	-15	1	14	
56-44.4158-105.3616-2-15-						0-404397	-5	-5	-5	18	-20	-15	14	-10	-15	1	17	
56-44.4094-105.3236-2-15-						0-404399	-5	-5	-5	20	-20	-15	19	-10	-15	2	29	
56-44.3938-105.3030-2-15-						0-404401	-5	-5	-5	24	-20	-15	-5	-10	-15	1	16	
56-44.3813-105.3016-2-15-						0-404402	-5	-5	-5	36	-20	23	13	-10	-15	2	27	
56-44.9333-105.7730-2-15-						0-404406	-5	-5	-5	32	-20	24	8	-10	-15	2	26	
56-44.9269-105.7766-2-15-						0-404407	-5	-5	-5	34	-20	-15	10	-10	-15	2	37	
56-44.9736-105.8194-2-15-						0-404408	-5	-5	-5	26	-20	-15	16	-10	-15	2	27	
56-44.9883-105.8386-2-15-						0-404410	-5	-5	-5	30	-20	-15	12	-10	-15	2	28	
56-44.9536-105.8080-2-15-						0-404411	-5	-5	-5	29	-20	-15	12	-10	-15	2	43	
56-44.9347-105.8160-2-15-						0-404412	-5	-5	-5	21	-20	18	11	-10	-15	2	26	
56-44.9755-105.9091-2-15-						0-404414	-5	-5	-5	34	-20	-15	11	-10	-15	2	34	
56-44.9419-105.9119-2-15-						0-404416	-5	-5	-5	42	-20	25	13	-10	-15	2	43	
56-44.9266-105.9138-2-15-						0-404417	-5	-5	-5	32	-20	21	11	-10	-15	2	25	
56-44.8888-105.9530-2-15-						0-404420	-5	-5	-5	25	-20	-15	13	-10	-15	2	26	
56-44.9661-105.9541-2-15-						0-404421	-5	-5	-5	22	-20	17	10	-10	-15	2	29	
56-44.7588-105.8958-2-15-						0-404423	-5	-5	-5	29	-20	-15	6	-10	-15	2	33	
56-44.7627-105.9172-2-15-						0-404424	-5	-5	-5	29	-20	22	21	-10	-15	2	31	
56-44.7919-105.9450-2-15-						0-404425	-5	-5	-5	35	-20	16	14	-10	-15	2	40	
56-44.8166-105.9866-2-15-						0-404427	-5	-5	-5	16	-20	20	12	-10	-15	2	29	
56-44.7769-105.8902-2-13-						0-404428	-5	-5	-5	24	-20	23	19	-10	-15	1	31	
56-44.8327-105.8941-2-15-						0-404429	-5	-5	-5	27	-20	19	5	-10	-15	1	23	
56-44.8700-105.9263-2-15-						0-404430	-5	-5	-5	36	-20	26	13	-10	-15	2	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	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
56-44.7300-105.9233-2-12-						0-W04300	65330	-0.09	652	11290	78	77	7.7	64	5.2	4	1.8	20700	6.1	20240	34	0.4
56-44.8011-105.8459-2-15-						0-W04302	59500	-0.07	598	20360	71	-58	9.2	60	3.8	5	1.4	22270	8.0	16980	38	0.4
56-44.7702-105.8147-2-14-						0-W04303	70570	-0.07	651	16490	85	-54	12.8	75	5.6	5	1.5	24560	7.5	15740	43	0.4
56-44.5711-105.8505-2-13-						0-W04315	70960	-0.06	520	9503	74	67	9.2	60	6.3	4	1.3	25680	7.3	16440	40	0.3
56-44.5927-105.9005-2-15-						0-W04320	76760	-0.09	576	17570	83	-40	8.1	72	6.4	5	1.3	26900	4.6	19110	35	0.4
56-44.9205-105.4352-2-37-						0-W04323	41220	-0.06	527	5132	55	-35	5.9	34	2.9	4	0.9	10850	6.6	12180	33	0.3
56-44.8883-105.6691-2-15-						0-W04326	52510	-0.08	522	8266	58	-58	7.4	36	3.6	4	0.9	11180	9.6	15970	32	0.3
56-44.9141-105.6625-2-37-						0-W04327	55400	-0.11	-172	41570	51	-82	15.2	44	4.4	4	0.9	16230	6.2	17310	37	0.3
56-44.9686-105.6777-2-15-						0-W04329	42640	-0.09	662	16450	55	69	15.1	53	3.5	5	1.0	15390	5.7	17670	29	0.4
56-44.9263-105.6525-2-15-						0-W04332	41920	-0.08	479	31000	71	-52	8.7	38	5.1	5	1.2	19650	6.1	19160	38	0.4
56-44.8788-105.6938-2-15-						0-W04333	62910	-0.12	522	6471	57	-42	8.5	54	4.6	4	1.0	10750	5.9	17160	-12	0.3
56-44.3166-105.6438-2-15-						0-W04342	72170	-0.18	677	6501	83	48	12.2	74	7.5	5	1.4	22410	5.9	17000	58	0.4
56-44.3136-105.6669-2-14-						0-W04348	57560	-0.12	525	38210	52	-63	14.6	39	3.8	4	0.9	11630	4.8	16660	27	0.3
56-44.3244-105.7063-2-14-						0-W04349	62750	-0.14	632	3081	64	-39	12.4	48	6.1	4	1.1	16550	5.9	20030	50	0.5
56-44.3194-105.8016-2-14-						0-W04350	57500	-0.11	534	9811	64	-50	8.0	46	3.9	4	1.1	14760	7.4	18690	34	0.4
56-44.3327-105.7508-2-14-						0-W04351	58650	-0.13	623	16430	68	-37	9.3	48	4.5	5	1.2	13890	6.0	21100	43	0.4
56-44.3467-105.7296-2-11-						0-W04356	57150	-0.10	475	20930	61	72	12.2	46	4.0	4	1.2	15180	6.9	16490	42	0.4
56-44.2905-105.6338-2-14-						0-W04357	74000	-0.09	595	5539	60	-44	14.2	43	5.2	4	1.0	15870	3.4	17930	38	0.3
56-44.3083-105.7266-2-14-						0-W04363	60560	-0.08	605	21040	75	64	9.2	63	4.4	4	1.1	18890	6.6	16370	43	0.4
56-44.0663-105.7105-2-14-						0-W04369	64430	-0.08	625	7238	74	-51	9.1	47	4.0	4	1.1	14920	5.7	19090	32	0.3
56-44.0761-105.5915-2-15-						0-W04372	59670	-0.10	435	6573	65	-45	13.0	47	4.4	4	1.1	18210	7.2	21130	42	0.6
56-44.0877-105.5922-2-12-						0-W04379	60950	-0.08	635	13920	51	-44	12.8	42	4.1	4	0.9	12530	5.4	18420	34	0.4
56-44.1633-105.5394-2-36-						0-W04381	58900	-0.08	557	5516	76	-40	8.4	56	4.9	4	1.2	15800	8.1	18660	37	0.4
56-44.4872-105.6033-2-37-						0-W04388	54780	-0.08	621	16320	54	-56	8.1	39	3.4	4	1.0	11340	5.8	14790	31	0.3
56-44.3758-105.4583-2-11-						0-W04389	56560	-0.09	515	4156	67	-44	11.2	40	3.6	4	1.0	13460	9.5	14590	53	0.3
56-44.4019-105.3813-2-11-						0-W04391	55310	-0.07	720	7845	47	76	11.9	38	2.8	4	0.9	9468	6.9	14380	28	0.3
56-44.4430-105.3847-2-11-						0-W04392	48070	-0.08	814	11350	57	65	7.9	41	2.9	4	0.8	13100	5.2	11660	27	0.3
56-44.4555-105.4100-2-11-						0-W04393	50600	-0.08	651	3843	55	-35	7.2	45	3.1	4	0.9	11070	9.1	12850	29	0.4
56-44.4738-105.3463-2-15-						0-W04396	41940	-0.08	496	-489	47	-36	9.8	30	2.5	3	1.1	7703	9.8	13860	30	0.4
56-44.4158-105.3616-2-15-						0-W04397	52600	-0.06	524	2847	48	-30	11.5	40	2.9	4	0.8	8763	6.3	13120	27	0.3
56-44.4094-105.3236-2-15-						0-W04399	59950	-0.09	687	8601	65	-56	8.5	52	3.6	4	1.1	14240	8.4	15470	38	0.4
56-44.3938-105.3030-2-15-						0-W04401	50820	-0.11	542	12410	36	64	10.9	35	3.2	3	0.9	10570	5.9	10100	22	0.2
56-44.3813-105.3016-2-15-						0-W04402	57960	-0.10	491	14290	62	-37	14.0	53	4.9	4	1.2	14590	6.0	15690	44	0.4
56-44.9333-105.7730-2-15-						0-W04404	67530	-0.10	536	19080	51	-63	18.3	53	3.6	4	0.8	12790	3.5	17620	27	0.3
56-44.9269-105.7766-2-15-						0-W04407	67050	-0.09	619	5439	67	-39	8.5	58	5.2	5	1.1	15580	8.2	17890	35	0.4
56-44.9736-105.8194-2-15-						0-W04409	49760	-0.07	456	22900	59	-63	8.4	40	3.0	4	1.0	11260	7.6	15980	31	0.4
56-44.9883-105.8386-2-15-						0-W04410	53930	-0.10	457	21160	56	-55	13.5	49	4.2	4	1.2	15150	7.2	17970	45	0.4
56-44.9536-105.8080-2-15-						0-W04411	68620	-0.08	520	10500	51	-59	14.7	43	4.2	5	1.1	14400	4.7	19350	33	0.4
56-44.9347-105.8100-2-15-						0-W04412	48480	-0.07	667	11070	62	-50	8.0	50	2.9	4	1.1	13610	9.8	15970	38	0.4
56-44.9755-105.8091-2-15-						0-W04414	62890	-0.09	609	17230	62	-65	8.3	43	4.1	4	1.0	12830	5.6	18220	35	0.4
56-44.9419-105.9119-2-15-						0-W04416	70410	-0.11	522	19840	68	-61	14.5	66	4.5	3	1.1	20400	5.0	15840	38	0.4
56-44.9266-105.9138-2-15-						0-W04417	54500	-0.07	693	15700	50	-54	12.2	38	2.7	4	1.0	12050	4.5	14430	27	0.3
56-44.8888-105.9530-2-15-						0-W04420	53170	-0.07	577	15090	67	-49	6.9	40	3.7	4	1.0	11740	8.1	16050	38	0.3
56-44.9661-105.9541-2-15-						0-W04421	57800	-0.08	564	13120	66	-64	7.6	42	3.6	4	1.0	11900	7.4	18300	35	0.4
56-44.7588-105.8958-2-15-						0-W04423	62090	-0.12	535	17960	55	-63	13.3	51	3.6	4	1.2	16730	5.2	16970	48	0.5
56-44.7627-105.9172-2-15-						0-W04424	86170	-0.09	618	7100	70	-52	15.0	62	5.3	5	0.9	16850	3.6	20390	40	0.3
56-44.7919-105.9450-2-15-						0-W04425	61830	-0.09	549	21370	68	-52	8.7	50	5.4	4	1.2	16230	4.8	18100	46	0.4
56-44.8166-105.9866-2-15-						0-W04427	52780	-0.09	631	8022	71	-58	8.3	50	3.6	4	1.2	16990	7.9	15310	34	0.4
56-44.7769-105.8902-2-13-						0-W04428	63210	-0.11	554	6104	64	-63	14.9	52	4.1	4	1.2	17130	8.2	19420	45	0.4
56-44.8327-105.8941-2-15-						0-W04429	41630	-0.06	691	13210	47	-41	10.2	33	2.3	4	0.8	8919	7.0	11720	29	0.3
56-44.8700-105.9263-2-15-						0-W04430	72640	-0.09	1322	5502	76	-32	9.6	61	5.6	5	1.3	14730	5.0	13550	42	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	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	
56-44.7800-105.9223-2-12						0-404200	14450	673	3037	63	-2	8.4	5.3	-281	-1	-1	13.4	3359	86	3.3	-22	0.261
56-44.8011-105.8469-2-15						0-404202	13560	613	3280	81	-2	8.4	5.3	-316	-1	-1	11.8	3372	80	4.4	106	0.288
56-44.7702-105.8147-2-14						0-404203	15380	282	2090	82	-2	9.5	7.6	-273	-1	-1	14.2	3618	100	4.7	151	0.268
56-44.6711-105.8505-2-13						0-404215	12970	279	2461	75	-2	9.6	4.8	-236	-1	-1	13.5	3069	97	3.1	-93	0.259
56-44.5927-105.9005-2-15						0-404220	20020	346	1401	82	-2	10.3	6.2	-238	-1	-1	14.5	3626	113	2.6	175	0.345
56-44.9205-105.4352-2-97						0-404223	7753	183	2268	36	-2	5.4	4.2	-165	-1	-1	8.3	2553	59	3.1	48	0.398
56-44.8883-105.6691-2-15						0-404226	11450	288	4072	40	-2	6.0	4.4	-273	-1	-1	9.7	2896	72	3.2	59	0.361
56-44.9141-105.6625-2-97						0-404227	28860	270	4806	-33	-3	7.4	5.8	-392	-1	-1	8.7	2298	49	3.7	79	0.368
56-44.9686-105.6777-2-15						0-404229	20990	270	2576	55	-2	7.3	4.5	299	-1	-1	10.1	3328	86	3.4	81	0.376
56-44.9263-105.6525-2-15						0-404232	27960	303	2848	64	-3	8.8	5.5	-237	-1	-1	9.5	3065	66	3.4	81	0.347
56-44.8788-105.6938-2-15						0-404233	9475	169	3022	41	-4	7.5	6.6	-191	-1	-1	11.7	3422	80	3.8	79	0.299
56-44.3166-105.4439-2-15						0-404242	9091	153	1043	59	-6	12.5	5.4	-172	-1	-1	17.7	3743	132	4.5	94	0.571
56-44.3136-105.6669-2-14						0-404248	22140	425	2171	42	-4	5.9	3.6	-326	-1	-1	7.9	2845	81	-2.5	56	0.519
56-44.3244-105.7063-2-14						0-404249	12650	151	1817	69	-6	9.3	4.2	-184	-1	-1	11.1	3222	85	-3.9	104	0.306
56-44.3194-105.8016-2-14						0-404250	12070	270	2482	46	-3	7.6	5.3	-229	-1	-1	11.3	2935	79	3.9	99	0.319
56-44.3327-105.7808-2-14						0-404251	15640	296	1624	55	-4	6.7	5.4	-137	-1	-1	11.7	3400	90	-2.9	-46	0.316
56-44.3469-105.7294-2-11						0-404256	19730	320	2210	57	-3	7.7	4.8	-222	-1	-1	10.9	2822	76	2.5	-39	0.349
56-44.2905-105.6338-2-14						0-404257	13730	185	1620	46	-3	7.9	4.1	-230	-1	-1	10.4	4001	112	2.5	99	0.346
56-44.0083-105.7266-2-14						0-404263	12680	693	1490	55	-3	8.2	4.9	-315	-1	-1	12.0	3056	80	4.5	110	0.292
56-44.0663-105.7105-2-14						0-404269	12790	344	2395	49	-3	7.1	5.2	-280	-1	-1	10.5	3201	79	2.8	65	0.343
56-44.0761-105.5916-2-15						0-404272	12880	285	2162	52	-3	9.4	4.6	-211	-1	-1	11.1	2630	80	-1.9	81	0.279
56-44.0877-105.5922-2-12						0-404279	15560	220	1094	50	-2	6.4	4.2	-214	-1	-1	8.7	3348	82	2.4	70	0.402
56-44.1633-105.5394-2-96						0-404281	11000	381	1533	45	-2	8.3	5.9	-230	-1	-1	12.3	3067	87	3.0	63	0.268
56-44.4872-105.6033-2-97						0-404288	12090	257	3149	37	-2	5.6	4.8	-252	-1	-1	9.9	2800	68	-2.2	92	0.293
56-44.3758-105.4583-2-11						0-404290	7445	183	2779	-23	-3	7.2	4.5	-172	-1	-1	11.1	2764	70	4.3	122	0.306
56-44.4019-105.3813-2-11						0-404291	11080	138	4678	36	-2	5.6	3.3	234	-1	-1	8.2	3132	72	3.2	86	0.476
56-44.4430-105.3847-2-11						0-404292	9734	164	2092	-23	-3	6.9	3.4	322	-1	-1	8.6	3192	85	-1.6	69	0.314
56-44.4555-105.4100-2-11						0-404293	7100	80	1164	46	-2	5.5	3.7	-171	-1	-1	7.3	2932	76	2.7	95	0.411
56-44.4738-105.3463-2-15						0-404296	5209	80	2627	-21	-2	4.9	3.7	-129	-1	-1	7.9	2418	39	3.0	-35	0.316
56-44.4158-105.3616-2-15						0-404297	7904	72	1455	36	-2	5.3	3.4	-135	-1	-1	6.9	3174	72	2.3	58	0.478
56-44.4094-105.3236-2-15						0-404299	8683	310	4540	48	-2	7.9	4.5	-228	-1	-1	10.3	3118	94	3.7	88	0.291
56-44.3938-105.3030-2-15						0-404301	9437	168	2150	-29	-3	5.6	1.9	-235	-2	-1	5.2	2518	108	-2.4	-96	0.558
56-44.3813-105.3016-2-15						0-404402	11540	281	1242	-25	-3	8.1	4.0	-198	-1	-1	12.2	2567	86	3.0	81	0.434
56-44.9333-105.7730-2-15						0-404406	17920	501	2434	43	-3	7.2	4.0	-360	-1	-1	9.0	3076	92	-2.7	-77	0.744
56-44.9269-105.7766-2-15						0-404407	11220	185	1632	53	-3	9.7	4.8	-194	-1	-1	14.6	3608	98	2.8	-29	0.356
56-44.9736-105.8194-2-15						0-404409	22060	338	5364	38	-2	5.9	4.7	-259	-1	-1	10.1	3004	55	5.1	-43	0.337
56-44.9883-105.8386-2-15						0-404410	18020	320	4395	70	-3	7.7	4.3	-216	-1	-1	9.3	2217	63	4.0	-38	0.301
56-44.9536-105.8080-2-15						0-404411	22200	377	4165	54	-2	7.8	4.2	-269	-1	-1	9.8	3704	90	3.2	60	0.337
56-44.9347-105.8100-2-15						0-404412	13610	368	3868	50	-2	6.7	5.0	-217	1	-1	11.6	3110	63	3.6	82	0.259
56-44.9755-105.9091-2-15						0-404414	18810	318	4319	-21	-3	7.3	4.6	-273	-1	-1	9.8	3012	76	-2.2	68	0.357
56-44.9419-105.9119-2-15						0-404416	21200	490	4613	-29	-3	11.1	4.2	-262	-1	-1	10.2	2758	89	3.0	-71	0.284
56-44.9266-105.9138-2-15						0-404417	18170	387	4464	41	-2	6.3	4.2	-245	-1	-1	8.0	2920	74	2.6	86	0.562
56-44.8888-105.9530-2-15						0-404420	16730	210	4614	67	-2	6.7	4.6	-191	-1	-1	10.8	2924	63	2.8	66	0.491
56-44.9661-105.9541-2-15						0-404421	14420	361	5433	57	-2	6.4	4.7	-271	-1	-1	9.1	2981	59	3.2	67	0.308
56-44.7588-105.8958-2-15						0-404423	15740	436	3264	47	-4	8.4	4.3	-266	-1	-1	9.6	3097	68	4.1	118	0.333
56-44.7627-105.9172-2-15						0-404424	20800	269	2633	57	-3	9.0	4.5	-260	-1	-1	11.0	3607	118	2.6	78	0.445
56-44.7919-105.9450-2-15						0-404425	26400	445	2795	55	-3	9.8	5.0	-274	-1	-1	11.9	2813	72	2.7	92	0.319
56-44.8166-105.9866-2-15						0-404427	10730	230	3631	-22	-3	5.9	4.5	-258	-1	-1	9.2	3224	68	-1.8	113	0.587
56-44.7769-105.8902-2-13						0-404429	8283	428	4364	-29	-3	3.7	4.2	-259	-1	-1	11.2	2982	76	-2.2	-97	0.295
56-44.8327-105.8941-2-15						0-404429	9875	269	2519	25	-2	4.7	3.4	-200		-1	8.3	2888	55	2.5	-54	0.470
56-44.8700-105.9263-2-15						0-404430	8186	100	901	-22	-3	11.3	5.2	386	-1	-1	13.4	3692	126	3.4	99	0.500

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 (dL/ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER 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																										
56-44.4336-105.5741-2-15-						Q-W044335-04/10/76-10-	R	-	-	-	-	-	-	-	15-1-7-5-7-	-1-	-	-4-2-2-3-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.70		
56-44.4000-105.5175-2-11-						Q-W044339-04/10/76-13-	10-11.0-	-	7.2	3000-	-	-	-	-	6-1-7-5-8-	-2-3-1-	-	-4-2-2-3-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	2.70		
56-44.3930-105.6441-2-15-						Q-W044447-04/10/76-16-	10-	-	-	-	-	-	-	-	9-1-7-4-7-	-1-	-	-4-2-2-3-	-9-	-	-	-	-	-	-	-	-	-	-	-	-	3.20		
56-44.3913-105.6463-2-15-						Q-W044448-04/10/76-16-	9-	-	-	-	-	-	-	-	9-1-7-4-7-	-1-	-	-4-2-2-3-	-9-	-	-	-	-	-	-	-	-	-	-	-	-	3.40		
56-44.4480-105.4580-2-15-						Q-W044454-04/12/76-9-	12-	-	-	-	-	-	-	-	15-1-7-4-7-	-1-	-	-4-2-2-3-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.00		
56-44.4625-105.4594-2-11-						Q-W044455-04/12/76-9-	11-10.0-	-	6.0	400-	-	-	-	-	12-1-7-4-6-3-3-1-	-	-	-4-2-2-3-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.50		
56-44.5183-105.4861-2-11-						Q-W044459-04/12/76-9-	14-12.0-	-	6.6	2000-	-	-	-	-	12-1-7-	-2-3-1-	-	-4-2-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	2.80		
56-44.4927-105.4165-2-99-						Q-W044467-04/12/76-10-	14-	-	-	-	-	-	-	-	9-1-7-4-6-	-1-	-	-1-2-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	2.20		
56-44.4819-105.4000-2-11-						Q-W044469-04/12/76-10-	17-11.0-	-	6.3	700-	-	-	-	-	15-1-7-4-6-2-2-1-	-	-	-1-2-3-3-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.70		
56-44.5580-105.4705-2-99-						Q-W044464-04/12/76-10-	19-	-	-	-	-	-	-	-	9-1-7-4-7-	-1-	-	-4-2-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.30		
56-44.5416-105.4050-2-15-						Q-W044465-04/12/76-10-	19-	-	-	-	-	-	-	-	15-1-7-4-7-	-1-	-	-4-2-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	2.20		
56-44.5686-105.4175-2-99-						Q-W044466-04/12/76-11-	19-	-	-	-	-	-	-	-	13-1-7-	-1-	-	-4-2-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.00		
56-44.5791-105.4197-2-99-						Q-W044467-04/12/76-11-	21-	-	-	-	-	-	-	-	9-1-7-4-7-	-1-	-	-1-2-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.10		
56-44.6102-105.3997-2-11-						Q-W044469-04/12/76-11-	22-14.0-	-	6.0	400-	-	-	-	-	9-1-7-	-	-	-	-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	4.10		
56-44.6188-105.4297-2-99-						Q-W044469-04/12/76-12-	21-	-	-	-	-	-	-	-	13-1-7-4-7-	-1-	-	-1-2-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	2.70		
56-44.5319-105.3505-2-15-						Q-W044479-04/12/76-12-	25-	-	-	-	-	-	-	-	12-1-7-4-7-	-1-	-	-4-2-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	2.70		
56-44.5455-105.3125-2-14-						Q-W044479-04/12/76-13-	29-14.0-	-	6.0	100-	-	-	-	-	9-1-7-5-7-1-2-2-	-	-	-4-2-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.40		
56-44.5252-105.2516-2-15-						Q-W044475-04/12/76-14-	29-	-	-	-	-	-	-	-	9-1-7-4-7-	-1-	-	-4-2-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	2.00		
56-44.6183-105.3622-2-15-						Q-W044479-04/12/76-16-	25-	-	-	-	-	-	-	-	9-1-7-4-7-	-1-	-	-4-2-1-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.40		
56-44.6194-105.9033-2-15-						Q-W04490-04/07/76-12-	19-	-	-	-	-	-	-	-	12-1-6-4-6-	-1-	-	-4-2-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.30		
56-44.6127-105.9300-2-15-						Q-W04491-04/07/76-12-	19-	-	-	-	-	-	-	-	9-1-4-4-6-	-1-	-	-4-3-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	4.90		
56-44.6327-105.9858-2-15-						Q-W04492-04/07/76-12-	16-	-	-	-	-	-	-	-	12-1-6-4-6-	-1-	-	-4-3-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	4.50		
56-44.6788-105.9751-2-15-						Q-W04493-04/07/76-13-	21-	-	-	-	-	-	-	-	19-1-6-4-6-	-1-	-	-4-3-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	4.60		
56-44.6797-105.9752-2-15-						Q-W04494-04/07/76-13-	21-	-	-	-	-	-	-	-	16-1-6-4-6-	-1-	-	-4-3-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	4.80		
56-44.7383-105.9444-2-15-						Q-W04498-04/07/76-15-	19-	-	-	-	-	-	-	-	12-1-2-4-6-	-1-	-	-3-2-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	7.40		
56-44.5177-105.9344-2-15-						Q-W04495-04/09/76-16-	19-	-	-	-	-	-	-	-	19-1-6-4-6-	-1-	-	-3-2-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	4.90		
56-44.1911-105.8383-2-15-						Q-W04497-04/19/76-9-	9-	-	-	-	-	-	-	-	9-1-6-4-6-	-1-	-	-4-3-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.60		
56-44.2402-105.5488-2-13-						Q-W04501-04/06/76-11-	19-	-	-	-	-	-	-	-	-	-	-3-	-	-	-2-	-1-	-	-	-	-	-	-	-	-	-	-	7.30		
56-44.2491-105.5965-2-97-						Q-W04503-04/07/76-12-	18-	-	-	-	-	-	-	-	-	-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00		
56-44.0972-105.2583-2-97-						Q-W04504-07/23/76-11-	26-	-	-	-	-	-	-	-	3-1-7-5-6-	-1-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.20		
56-44.1097-105.3369-2-15-						Q-W04506-07/23/76-12-	30-	-	-	-	-	-	-	-	9-1-6-5-6-	-1-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	4.20		
56-44.1205-105.3259-2-15-						Q-W04507-07/23/76-12-	22-	-	-	-	-	-	-	-	3-1-6-5-6-	-1-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	5.10		
56-44.1291-105.4541-2-15-						Q-W04517-07/23/76-14-	28-	-	-	-	-	-	-	-	15-1-7-5-6-	-1-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	4.10		
56-44.1444-105.4455-2-15-						Q-W04518-07/23/76-14-	29-	-	-	-	-	-	-	-	4-1-6-5-6-	-1-	-	-4-3-1-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.90		
56-44.2327-105.3805-2-15-						Q-W04519-07/23/76-15-	27-	-	-	-	-	-	-	-	9-1-7-5-6-	-1-	-	-3-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.60		
56-44.2300-105.4347-2-15-						Q-W04521-07/23/76-15-	32-	-	-	-	-	-	-	-	1-1-6-5-6-	-1-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.70		
56-44.0994-105.6491-2-97-						Q-W04524-07/24/76-15-	29-	-	-	-	-	-	-	-	1-1-1-4-6-	-1-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	2.90		
56-44.0755-105.0655-2-97-						Q-W04527-07/24/76-15-	29-	-	-	-	-	-	-	-	1-1-1-5-6-	-1-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.60		
56-44.0935-105.1998-2-15-						Q-W04529-07/24/76-17-	29-	-	-	-	-	-	-	-	1-1-6-5-1-	-1-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	2.80		
56-44.4711-105.8977-2-15-						Q-W04535-10/08/76-11-	19-	-	-	-	-	-	-	-	11-1-7-4-6-	-1-	-	2-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	4.30		
56-44.4486-105.8561-2-15-						Q-W04537-10/08/76-11-	19-	-	-	-	-	-	-	-	16-1-7-4-6-	-1-	-	2-2-1-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.00		
56-44.4547-105.8583-2-15-						Q-W04538-10/08/76-11-	19-	-	-	-	-	-	-	-	14-1-7-5-6-	-1-	-	2-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	4.40		
56-44.4666-105.7764-2-15-						Q-W04541-10/08/76-12-	20-	-	-	-	-	-	-	-	12-1-7-5-6-	-1-	-	2-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.90		
56-44.4416-105.7569-2-15-						Q-W04543-10/08/76-12-	20-	-	-	-	-	-	-	-	16-1-7-5-6-	-1-	-	2-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	4.50		
56-44.4225-105.8602-2-15-						Q-W04544-10/08/76-12-	20-	-	-	-	-	-	-	-	11-1-7-4-6-	-1-	-	2-3-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.90		
56-44.4061-105.8286-2-15-						Q-W04544-10/08/76-13-	21-	-	-	-	-	-	-	-	9-1-7-5-6-	-1-	-	2-3-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.70		
56-44.6658-105.0661-2-15-						Q-W04547-07/24/76-11-	35-	-	-	-	-	-	-	-	6-1-7-4-6-	-1-	-	-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	2.80		
56-44.6500-105.1055-2-15-						Q-W04549-07/24/76-12-	35-	-	-	-	-	-	-	-	14-1-7-4-6-	-1-	-	-4-4-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	2.50		
56-44.5241-105.1702-2-15-						Q-W04554-07/24/76-14-	36-	-	-	-	-	-	-	-	11-1-7-4-6-	-1-	-	-4-2-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.30		
56-44.5997-105.2013-2-15-						Q-W04559-07/24/76-17-	35-	-	-	-	-	-	-	-	10-1-7-4-6-	-1-	-	-2-2-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	2.90		
56-44.1463-105.1361-2-14-						Q-W04565-07/24/76-14-	38-25.0-	-	6.3	230-	-	-	-	-	12-1-6-5-6-2-2-2-	-	-	-4-2-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	3.50		

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

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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	
56-44.4336-105.5741-2-15-						0-W04435	-5	-5	-5	31	-20	25	11	-10	-15		-1	29
56-44.4000-105.5175-2-11-						0-W04437	-5	-5	-5	25	-20	-15	9	-10	-15		2	18
56-44.3930-105.6461-2-15-						0-W04447	-5	-5	-5	26	23	18	14	-10	-15		2	21
56-44.3913-105.6463-2-15-						0-W04448	-5	-5	-5	30	-20	19	16	-10	-15		2	31
56-44.4480-105.4580-2-15-						0-W04454	-5	-5	-5	29	-20	-15	10	-10	-15		2	17
56-44.4625-105.4594-2-11-						0-W04455	-5	-5	-5	35	-20	20	18	-10	-15		2	26
56-44.5183-105.4861-2-11-						0-W04457	-5	-5	-5	29	-20	-15	12	-10	-15		1	18
56-44.4927-105.4105-2-99-						0-W04457	-5	-5	-5	23	-20	-15	-5	-10	-15		1	9
56-44.4819-105.4000-2-11-						0-W04463	-5	-5	-5	34	23	-15	18	-10	-15		2	24
56-44.5580-105.4705-2-99-						0-W04464	-5	-5	-5	-10	-20	-15	6	-10	-15		-1	8
56-44.5416-105.4050-2-15-						0-W04465	-5	-5	-5	-10	-20	-15	13	-10	-15		-1	8
56-44.5686-105.4175-2-99-						0-W04466	-5	-5	-5	25	21	20	7	-10	-15		2	19
56-44.5791-105.4197-2-99-						0-W04467	-5	-5	-5	47	-20	-15	15	-10	-15		2	19
56-44.6102-105.3997-2-11-						0-W04468	-5	-5	-5	25	-20	35	6	-10	-15		2	20
56-44.6188-105.4297-2-99-						0-W04469	-5	-5	-5	19	-20	-15	9	-10	-15		2	23
56-44.5319-105.3505-2-15-						0-W04470	-5	-5	-5	12	23	-15	-5	-10	-15		1	13
56-44.5455-105.3125-2-14-						0-W04472	-5	-5	-5	22	-20	-15	6	-10	-15		2	21
56-44.5252-105.2516-2-15-						0-W04475	-5	-5	-5	16	-20	19	8	-10	-15		1	14
56-44.6183-105.3022-2-15-						0-W04476	-5	-5	-5	12	-20	21	5	-10	-15		1	10
56-44.6194-105.2033-2-15-						0-W04490	-5	-5	-5	31	-20	35	9	-10	-15		2	29
56-44.6127-105.2300-2-15-						0-W04491	-5	-5	-5	33	-20	39	15	-10	-15		2	27
56-44.6327-105.2858-2-15-						0-W04492	-5	-5	-5	46	-20	17	18	-10	-15		3	39
56-44.6788-105.2761-2-15-						0-W04493	-5	-5	-5	53	-20	36	15	-10	-15		2	34
56-44.6797-105.2752-2-15-						0-W04494	-5	-5	-5	28	-20	15	21	-10	-15		3	45
56-44.7383-105.2444-2-15-						0-W04499	-5	-5	-5	32	-20	-15	12	-10	-15		2	25
56-44.5177-105.2344-2-15-						0-W04495	-5	-5	-5	35	-20	-15	16	-10	-15		2	36
56-44.1911-105.8383-2-15-						0-W04497	-5	-5	-5	32	-20	27	12	-10	-15		2	24
56-44.2402-105.5488-2-13-						0-W04501	-5	-5	-5	40	-20	44	15	-10	-15		2	19
56-44.2491-105.5966-2-97-						0-W04503	-5	-5	-5	39	-20	20	6	-10	22		1	17
56-44.0972-105.2583-2-97-						0-W04504	-5	-5	-5	33	-20	-15	15	-10	-15		2	14
56-44.1097-105.3362-2-15-						0-W04506	-5	-5	-5	36	-20	-15	18	-10	-15		2	38
56-44.1205-105.3258-2-15-						0-W04507	-5	-5	-5	34	-20	-15	8	-10	-15		2	23
56-44.1291-105.4541-2-15-						0-W04513	-5	-5	-5	38	-20	23	12	-10	-15		2	27
56-44.1644-105.4455-2-15-						0-W04515	-5	-5	-5	35	-20	21	13	-10	-15		2	24
56-44.2327-105.3805-2-15-						0-W04519	-5	-5	-5	32	22	15	12	-10	-15		2	34
56-44.2300-105.4847-2-15-						0-W04521	-5	-5	-5	17	26	17	11	-10	-15		2	26
56-44.0994-105.0691-2-97-						0-W04524	-5	-5	-5	19	-20	-15	12	-10	-15		1	18
56-44.0755-105.0655-2-97-						0-W04527	-5	-5	-5	11	-20	-15	9	-10	-15		2	25
56-44.0936-105.1988-2-15-						0-W04529	-5	-5	-5	11	-20	-15	9	-10	-15		2	23
56-44.4711-105.8977-2-15-						0-W04525	-5	-5	-5	29	-20	25	14	-10	-15		2	23
56-44.4486-105.8661-2-15-						0-W04527	-5	-5	-5	13	-20	-15	6	-10	-15		2	22
56-44.4547-105.8583-2-15-						0-W04533	-5	-5	-5	30	-20	-15	10	-10	-15		3	39
56-44.4666-105.7766-2-15-						0-W04541	-5	-5	-5	20	-20	22	13	-10	-15		2	24
56-44.4416-105.7569-2-15-						0-W04542	-5	-5	-5	29	-20	28	16	-10	-15		2	33
56-44.4225-105.8502-2-15-						0-W04544	-5	-5	-5	29	-20	16	15	-10	-15		2	31
56-44.4061-105.8286-2-15-						0-W04546	-5	-5	-5	27	-20	18	10	-10	-15		2	31
56-44.6658-105.0661-2-15-						0-W04547	-5	-5	-5	17	-20	-15	-5	-10	-15		2	27
56-44.6500-105.1055-2-15-						0-W04549	-5	-5	-5	30	-20	-15	9	-10	-15		2	42
56-44.6241-105.1702-2-15-						0-W04554	-5	-5	-5	27	-20	21	8	-10	-15		2	41
56-44.6997-105.2013-2-15-						0-W04562	-5	-5	-5	30	-20	-15	14	-10	-15		2	43
56-44.1463-105.1361-2-14-						0-W04565	-5	-5	-5	26	-20	22	10	-10	-15		2	38

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

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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
56-44.4335-105.5741-2-15-	0-404435	67440	-0.09	415	15330	57	-54	10.3	55	4.3	5	1.1	13150	6.0	16690	36	0.4					
56-44.4000-105.5175-2-11-	0-404432	47260	-0.12	419	40620	54	384	15.9	36	-2.0	3	1.2	10530	7.7	14220	40	0.4					
56-44.3930-105.6461-2-15-	0-404447	52920	-0.06	572	4348	54	-35	11.0	33	3.3	4	0.9	11010	6.1	18210	31	0.3					
56-44.3913-105.6463-2-15-	0-404449	60000	-0.08	557	12370	67	-40	7.8	54	4.9	4	1.1	17100	5.6	16260	39	0.4					
56-44.4480-105.4580-2-15-	0-404454	50650	-0.07	535	4296	54	-34	6.7	40	2.4	3	0.9	9446	8.6	10980	31	0.3					
56-44.4625-105.4594-2-11-	0-404455	69030	-0.14	643	20150	56	-47	19.0	54	5.9	4	1.2	15770	4.8	13280	38	0.3					
56-44.5183-105.4861-2-11-	0-404450	56720	-0.03	697	15110	45	-48	15.5	31	2.9	4	0.9	11330	5.3	15560	28	0.3					
56-44.4927-105.4105-2-99-	0-404462	32370	-0.05	541	-406	38	-23	4.4	25	2.4	3	0.8	7060	6.3	10520	25	0.2					
56-44.4819-105.4000-2-11-	0-404463	76670	-0.09	645	4689	60	-37	9.5	65	4.3	4	1.1	11740	5.8	13500	27	0.3					
56-44.5580-105.4705-2-99-	0-404464	23890	-0.07	528	-342	62	-25	7.1	46	-1.0	3	1.0	9118	22.6	10820	40	0.5					
56-44.5415-105.4050-2-15-	0-404465	21950	-0.04	529	-310	39	-43	6.4	29	0.8	3	0.6	4906	7.8	10560	18	0.2					
56-44.5686-105.4175-2-99-	0-404466	47350	-0.07	612	16760	66	-54	6.2	36	2.8	4	1.0	11440	8.8	18330	32	0.4					
56-44.5791-105.4197-2-99-	0-404467	64940	-0.09	550	6114	54	83	10.3	52	3.3	4	1.0	14440	4.5	12440	33	0.3					
56-44.5102-105.3997-2-11-	0-404468	65860	-0.12	672	6008	51	-41	17.4	50	4.4	5	0.9	11150	5.5	13640	37	0.3					
56-44.5188-105.4297-2-99-	0-404469	48720	-0.10	440	3745	56	-49	5.7	47	3.0	3	0.9	10560	9.4	15330	34	0.3					
56-44.5319-105.3505-2-15-	0-404470	26720	-0.08	585	1150	50	-31	4.6	35	1.5	3	0.8	4851	12.3	10710	34	0.3					
56-44.5455-105.3125-2-14-	0-404472	48770	-0.14	547	1946	49	-37	9.3	45	3.9	4	0.9	9729	9.9	15400	44	0.3					
56-44.5252-105.2516-2-15-	0-404475	38810	-0.07	552	-498	32	56	8.1	23	1.8	3	0.6	5602	5.7	13610	20	0.2					
56-44.5183-105.3022-2-15-	0-404470	28560	-0.07	490	4572	68	39	3.8	46	1.9	3	0.9	7579	20.3	11550	38	0.5					
56-44.5194-105.9033-2-15-	0-404490	56440	-0.13	607	17850	53	-57	9.8	42	3.6	4	1.0	14920	4.5	16130	-12	0.3					
56-44.5127-105.9300-2-15-	0-404491	54270	-0.16	818	42890	63	-56	13.9	44	3.9	5	1.2	22030	6.9	14280	54	0.4					
56-44.5327-105.9858-2-15-	0-404492	23820	-0.14	672	13040	65	-52	15.9	64	6.4	5	0.9	17290	3.1	20080	35	0.3					
56-44.6788-105.9761-2-15-	0-404493	62350	-0.12	724	21930	73	-65	12.9	66	4.6	3	1.3	23040	6.3	16440	42	0.4					
56-44.6797-105.9752-2-15-	0-404494	89780	-0.16	626	11280	71	-41	11.1	78	7.5	4	1.1	20180	2.6	17950	45	0.3					
56-44.7383-105.9444-2-15-	0-404498	48700	-0.17	546	28420	72	-70	12.7	39	3.9	4	1.2	18810	10.5	13500	58	0.3					
56-44.5177-105.9344-2-15-	0-404495	55620	-0.11	521	12910	54	-46	13.0	45	3.9	4	0.8	12710	4.2	18710	22	0.3					
56-44.1911-105.8383-2-15-	0-404497	62710	-0.12	445	7651	76	-43	8.7	64	5.6	4	1.1	16640	6.1	19020	45	0.3					
56-44.2402-105.6488-2-13-	0-404501	75250	-0.15	488	21090	77	-37	14.8	55	6.0	5	1.3	19750	3.9	15810	32	0.4					
56-44.2491-105.5966-2-97-	0-404503	44610	-0.12	859	7209	61	-34	12.1	49	3.5	5	1.3	14640	13.7	13270	56	0.5					
56-44.0972-105.2583-2-97-	0-404504	87990	-0.12	593	3100	40	-36	14.6	51	4.3	3	0.6	10370	3.6	11580	38	0.2					
56-44.1097-105.3369-2-15-	0-404506	84670	-0.13	521	3401	68	-38	7.7	63	6.1	4	1.1	17600	5.2	19160	54	0.4					
56-44.1205-105.3258-2-15-	0-404507	68340	-0.16	572	10550	58	-50	12.1	60	4.4	3	1.1	15420	4.0	12730	32	0.3					
56-44.1291-105.4541-2-15-	0-404512	63780	-0.15	618	10920	87	53	13.5	52	4.5	5	1.4	18080	8.1	16310	43	0.3					
56-44.1644-105.4455-2-15-	0-404515	56140	-0.11	631	22630	53	-67	12.1	27	2.4	4	1.0	9385	7.1	16060	35	0.3					
56-44.2327-105.3805-2-15-	0-404519	68960	-0.12	521	7136	77	112	9.2	64	4.7	4	1.2	15650	6.1	16680	53	0.4					
56-44.2300-105.4847-2-15-	0-404521	57570	-0.11	644	4070	72	-55	7.0	46	2.6	4	1.1	11110	8.0	18630	46	0.3					
56-44.0994-105.0691-2-97-	0-404524	49370	-0.16	499	4862	55	-49	10.3	37	3.4	3	1.1	13460	5.5	17480	-18	0.3					
56-44.0755-105.0655-2-97-	0-404527	70110	-0.11	633	3125	54	-38	11.9	50	4.1	4	0.7	9672	4.8	13400	25	0.4					
56-44.0936-105.1988-2-15-	0-404522	52220	-0.09	464	2681	52	36	5.4	49	2.8	3	0.8	8805	8.4	12910	27	0.3					
56-44.4711-105.8977-2-15-	0-404535	47820	-0.10	566	18550	56	57	7.7	40	3.9	4	1.0	11510	7.0	16280	31	0.3					
56-44.4486-105.8661-2-15-	0-404537	41220	-0.12	679	15750	54	52	10.0	24	3.3	4	1.0	11290	6.0	16480	32	0.4					
56-44.4547-105.8583-2-15-	0-404538	72900	-0.11	504	22220	54	-45	13.4	49	5.9	4	1.1	15930	4.2	18180	32	0.4					
56-44.4666-105.7766-2-15-	0-404541	50840	-0.09	482	17590	63	66	6.6	41	4.4	4	1.1	12500	11.0	16000	44	0.4					
56-44.4416-105.7569-2-15-	0-404543	71760	-0.14	587	17500	66	51	9.9	51	5.6	5	1.1	16730	4.5	18320	39	0.4					
56-44.4225-105.8602-2-15-	0-404544	63760	-0.15	653	24520	57	68	13.6	59	7.0	4	1.4	21050	5.7	17050	-13	0.3					
56-44.4061-105.8266-2-15-	0-404546	52720	-0.09	596	21420	51	77	11.5	34	3.3	4	0.9	11090	4.8	14830	-10	0.3					
56-44.6658-105.0661-2-15-	0-404547	42100	-0.08	545	14520	55	-51	4.9	40	3.1	3	0.9	9253	9.2	15590	34	0.4					
56-44.6500-105.1055-2-15-	0-404549	49070	-0.11	562	5897	50	81	7.1	35	3.5	4	0.9	9633	5.8	16180	33	0.3					
56-44.5241-105.1702-2-15-	0-404554	56180	-0.14	502	19960	56	-51	11.4	54	5.5	4	1.1	13650	7.1	16200	53	0.4					
56-44.5997-105.2013-2-15-	0-404562	63950	-0.11	564	13960	50	102	12.6	37	4.5	4	0.9	10480	5.1	18530	25	0.3					
56-44.1463-105.1361-2-14-	0-404565	67680	-0.11	419	4196	56	81	6.6	53	4.5	3	0.9	11330	6.6	15100	39	0.3					

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

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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	
56-44.4335-105.5741-2-15						0-404435	23840	349	2909	46	-3	7.5	5.1	-278	-1	-1	11.7	3778	88	2.7	-72	0.316
56-44.4300-105.5175-2-11						0-404432	15170	246	6055	-31	-3	5.1	3.6	643	-1	-1	9.2	2001	39	-2.2	128	0.293
56-44.3930-105.6461-2-15						0-404447	9067	323	1592	53	-2	5.3	4.3	-210	-1	-1	8.2	3413	74	3.0	98	0.390
56-44.3913-105.6463-2-15						0-404449	14310	305	1376	50	-2	9.1	4.5	-213	-1	-1	11.9	3409	84	4.0	80	0.286
56-44.4480-105.4580-2-15						0-404454	7854	127	1532	43	-2	5.4	4.1	-165	-1	-1	7.3	3205	71	2.0	80	0.411
56-44.4625-105.4594-2-11						0-404455	13080	191	1579	-34	-4	10.6	4.6	-222	-1	-1	9.6	2920	114	3.8	172	0.365
56-44.5183-105.4861-2-11						0-404450	10730	266	1846	-20	-3	6.3	3.3	-246	-1	-1	7.5	3168	87	2.4	109	0.373
56-44.4927-105.4105-2-29						0-404462	4417	45	1020	51	-2	3.7	2.4	-102	-1	-1	5.1	2149	47	1.5	-21	0.431
56-44.4619-105.4000-2-11						0-404463	12510	60	1402	-21	-3	8.9	4.2	-175	-1	-1	10.4	3523	119	3.0	96	0.356
56-44.5580-105.4705-2-99						0-404464	-1260	118	1157	26	-2	3.2	4.5	-117	-1	-1	7.4	2439	34	3.5	61	0.446
56-44.5416-105.4050-2-15						0-404465	-1200	90	1381	19	-1	2.0	3.0	-110	-1	-1	4.5	2252	27	1.7	-19	0.489
56-44.5686-105.4175-2-99						0-404466	12760	257	5053	-18	-2	5.7	4.9	-209	-1	-1	10.0	2886	53	2.8	-25	0.300
56-44.5791-105.4197-2-99						0-404467	9859	317	2419	-22	-3	7.6	3.8	-283	-1	-1	8.4	2897	93	3.3	119	0.369
56-44.6102-105.3997-2-11						0-404468	11200	124	2097	44	-4	7.5	4.5	-192	-1	-1	8.0	3897	104	3.6	72	0.512
56-44.6188-105.4297-2-99						0-404469	7061	187	4287	-15	-3	6.1	3.8	-174	-1	-1	9.2	2574	62	2.4	78	0.293
56-44.5319-105.3505-2-15						0-404470	2674	92	2556	22	-2	2.6	2.2	-122	-1	-1	5.4	2598	28	2.7	31	0.500
56-44.5455-105.3125-2-14						0-404472	6739	92	2418	-24	-4	6.3	4.3	-148	-1	-1	8.4	2930	65	3.4	54	0.405
56-44.5252-105.2515-2-15						0-404475	3838	96	3052	27	-2	3.1	2.5	-150	-1	-1	4.8	2092	39	2.3	27	0.417
56-44.6183-105.3022-2-15						0-404473	5873	167	2567	23	-2	3.4	3.9	-138	-1	-1	9.1	2633	34	3.5	30	0.374
56-44.6194-105.9033-2-15						0-404490	14420	429	4794	56	-4	7.0	4.1	-265	-1	-1	8.9	2908	75	3.1	75	0.371
56-44.6127-105.9300-2-15						0-404491	15170	614	2857	51	-5	8.5	4.7	-281	-1	-1	10.7	3100	81	4.7	82	0.458
56-44.6327-105.9858-2-15						0-404492	18800	320	1521	76	-4	9.6	3.8	-286	-1	-1	12.4	4181	137	3.0	-65	0.363
56-44.6788-105.9761-2-15						0-404493	18200	556	4901	51	-4	10.4	4.7	-271	-1	-1	10.9	3055	100	3.1	-84	0.422
56-44.6797-105.9752-2-15						0-404494	19720	305	1273	44	-5	10.5	6.5	-246	-1	-1	14.2	4299	136	4.6	128	0.338
56-44.7383-105.9644-2-15						0-404498	12360	872	4299	-29	-5	7.6	5.0	-346	-1	-1	12.6	3370	72	5.0	83	0.587
56-44.5177-105.9344-2-15						0-404495	17390	286	1540	46	-4	6.5	3.7	-241	-1	-1	9.5	3460	91	2.9	63	0.516
56-44.1911-105.8383-2-15						0-404497	15720	293	1719	60	-4	9.1	5.6	-214	-1	-1	11.8	3080	104	4.9	96	0.305
56-44.2402-105.5488-2-13						0-404501	12640	336	1023	43	-5	9.5	6.1	-230	-1	-1	12.6	3609	132	5.4	122	0.579
56-44.2491-105.5966-2-97						0-404502	8388	287	2243	56	-4	6.9	5.6	-172	-1	-1	11.9	3650	67	4.3	82	0.336
56-44.0972-105.2583-2-97						0-404504	9047	101	810	50	-4	7.6	3.0	-203	-1	-1	7.8	3584	85	3.2	52	0.410
56-44.1097-105.3369-2-15						0-404506	13970	174	1597	51	-4	11.2	4.6	-184	-1	-1	13.4	3530	114	3.2	121	0.313
56-44.1205-105.3258-2-15						0-404507	8906	249	1722	59	-5	8.2	4.2	-250	-1	-1	10.0	3504	110	-2.9	109	0.510
56-44.1291-105.4541-2-15						0-404513	13580	331	4271	58	-5	9.2	5.5	-219	-1	-1	15.6	3330	87	4.9	102	0.263
56-44.1644-105.4455-2-15						0-404515	16530	369	5694	48	-3	5.1	4.5	450	-1	-1	9.2	3253	59	3.0	75	0.424
56-44.2327-105.3805-2-15						0-404518	11800	382	1772	62	-4	8.8	5.8	-239	-1	-1	12.9	2949	95	3.9	133	0.279
56-44.2360-105.4847-2-15						0-404521	9072	232	6057	47	-4	6.1	5.3	-202	-1	-1	11.8	3328	59	3.7	75	0.314
56-44.0994-105.0691-2-97						0-404524	8075	292	3529	-25	-5	6.8	3.3	-223	-1	-1	9.5	2499	62	4.2	-70	0.305
56-44.0755-105.0655-2-97						0-404527	8872	150	1593	48	-3	6.9	3.5	-197	-1	-1	8.9	3747	82	2.6	48	0.404
56-44.0936-105.1938-2-15						0-404522	5525	72	773	26	-3	5.9	2.8	-124	-1	-1	7.3	2972	56	2.8	67	0.384
56-44.4711-105.8977-2-15						0-404535	13780	289	1215	40	-3	5.6	3.8	-181	-1	-1	9.8	2888	69	4.0	65	0.439
56-44.4486-105.8661-2-15						0-404537	12420	287	1257	40	-4	5.4	3.6	-178	1	-1	8.0	2172	53	-2.5	57	0.375
56-44.4547-105.8583-2-15						0-404538	19350	328	1460	42	-3	7.7	4.6	-241	-1	-1	9.6	3547	106	-1.7	67	0.458
56-44.4666-105.7766-2-15						0-404541	15450	294	1942	43	-3	6.3	4.5	-176	-1	-1	11.0	2782	70	3.5	56	0.355
56-44.4416-105.7569-2-15						0-404542	19230	326	1634	54	-4	8.1	5.1	-227	-1	-1	10.6	3489	102	3.5	89	0.425
56-44.4225-105.8502-2-15						0-404544	18770	420	1431	57	-5	9.9	5.7	-219	-1	-1	11.8	3574	91	4.2	91	0.331
56-44.4061-105.8286-2-15						0-404546	17230	349	2802	35	-3	5.2	3.6	-244	-1	-1	8.1	2569	71	2.6	71	0.457
56-44.6658-105.0661-2-15						0-404547	14650	248	4845	43	-3	4.8	4.5	-179	-1	-1	7.3	2095	44	3.2	49	0.384
56-44.6500-105.1055-2-15						0-404549	11380	311	6036	-17	-3	5.1	4.0	-226	-1	-1	7.7	2855	60	3.1	66	0.325
56-44.5241-105.1702-2-15						0-404554	21930	269	4660	54	-5	7.5	4.3	-209	-1	-1	8.6	3004	60	3.6	-23	0.384
56-44.5997-105.2013-2-15						0-404562	17670	297	3218	43	-4	5.8	3.6	-271	-1	-1	7.9	3110	67	2.7	71	0.367
56-44.1463-105.1361-2-14						0-404565	9072	103	1179	50	-3	7.8	4.2	-147	-1	-1	9.6	3213	75	3.1	70	0.365

[illegible]

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

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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	
56-44.1430-105.1255-2-15-						0-404544	-5	-5	-5	11	-20	-15	-5	-10	-15	1	21	
56-44.1330-105.1616-2-15-						0-404547	-5	-5	-5	21	-20	-15	10	-10	-15	1	23	
56-44.1527-105.1847-2-97-						0-404549	-5	-5	-5	15	-20	-15	7	-10	-15	1	16	
56-44.1722-105.1311-2-97-						0-404540	-5	-5	-5	20	-20	-15	15	-10	-15	2	42	
56-44.0761-105.1369-2-15-						0-404571	-5	-5	-5	29	-20	-15	13	-10	-15	2	36	
56-44.0272-105.1547-2-15-						0-404573	-5	-5	-5	41	-20	22	15	-10	-15	2	50	
56-44.0650-105.1627-2-14-						0-404574	-5	-5	-5	33	-20	-15	14	-10	-15	2	34	
56-44.0505-105.1730-2-15-						0-404575	-5	-5	-5	31	-20	20	15	-10	-15	2	35	
56-44.0461-105.0700-2-15-						0-404576	-5	-5	-5	19	-20	15	9	-10	-15	2	46	
56-44.0166-105.0594-2-15-						0-404577	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	23	
56-44.0377-105.0572-2-15-						0-404578	-5	-5	-5	33	-20	26	18	-10	-15	2	32	
56-44.1177-105.0044-2-97-						0-404579	-5	-5	-5	29	-20	-15	8	-10	-15	1	28	
56-44.9155-105.0966-2-15-						0-404593	-5	-5	-5	22	-20	-15	-5	-10	-15	2	34	
56-44.9997-105.0161-2-97-						0-404584	-5	-5	-5	30	-20	-15	11	-10	16	2	41	
56-44.9700-105.0255-2-15-						0-404595	-5	-5	-5	24	-20	-15	-5	-10	-15	2	32	
56-44.9561-105.0372-2-15-						0-404596	-5	-5	-5	22	-20	21	8	-10	-15	2	47	
56-44.9430-105.0298-2-15-						0-404597	-5	-5	-5	34	-20	-15	11	-10	-15	2	31	
56-44.9425-105.0311-2-15-						0-404598	-5	-5	-5	27	-20	-15	-5	-10	-15	2	33	
56-44.9361-105.0411-2-15-						0-404599	-5	-5	-5	33	-20	27	8	-10	-15	2	43	
56-44.9327-105.1500-2-15-						0-404604	-5	-5	-5	18	-20	-15	9	-10	-15	2	40	
56-44.2733-105.2450-2-15-						0-404611	-5	-5	-5	15	-20	-15	8	-10	-15	2	31	
56-44.2572-105.2116-2-14-						0-404612	-5	-5	-5	15	-20	-15	7	-10	-15	2	26	
56-44.2100-105.2138-2-97-						0-404613	-5	-5	-5	22	-20	-15	8	-10	-15	2	25	
56-44.2627-105.1716-2-97-						0-404614	-5	-5	-5	35	-20	-15	13	-10	-15	2	20	
56-44.2338-105.1883-2-15-						0-404615	-5	-5	-5	17	-20	-15	9	-10	-15	2	28	
56-44.2316-105.1549-2-14-						0-404616	-5	-5	-5	18	-20	-15	5	-10	-15	-1	36	
56-44.1627-105.1722-2-15-						0-404617	-5	-5	-5	23	-20	-15	15	-10	-15	2	49	
56-44.8683-105.0922-2-14-						0-404618	-5	-5	-5	18	-20	-15	7	-10	-15	2	60	
56-44.8558-105.0591-2-14-						0-404619	-5	-5	-5	11	-20	-15	5	-10	-15	2	26	
56-44.9702-105.0352-2-14-						0-404620	-5	-5	-5	16	-20	-15	8	-10	-15	2	31	
56-44.8563-105.0066-2-14-						0-404621	-5	-5	-5	39	27	26	15	-10	-15	2	48	
56-44.8488-105.0725-2-14-						0-404622	-5	-5	-5	28	-20	35	17	-10	-15	2	30	
56-44.8233-105.0713-2-14-						0-404623	-5	-5	-5	33	-20	30	15	-10	-15	1	84	
56-44.8180-105.0255-2-14-						0-404624	-5	-5	-5	35	-20	18	11	-10	-15	2	50	
56-44.7605-105.0072-2-15-						0-404625	-5	-5	-5	21	-20	17	6	-10	-15	2	31	
56-44.7625-105.0458-2-14-						0-404626	-5	-5	-5	16	-20	-15	13	-10	-15	2	29	
56-44.7825-105.0416-2-14-						0-404627	-5	-5	-5	23	-20	-15	6	-10	-15	2	30	
56-44.7841-105.0863-2-14-						0-404628	-5	-5	-5	29	-20	17	11	-10	-15	2	43	
56-44.8111-105.0863-2-14-						0-404629	-5	-5	-5	25	-20	-15	12	-10	-15	2	30	
56-44.8213-105.1041-2-15-						0-404630	-5	-5	-5	-10	-20	-15	-5	-10	-15	2	19	
56-44.8527-105.1491-2-15-						0-404631	-5	-5	-5	23	-20	34	12	-10	-15	2	36	
56-44.7905-105.2236-2-15-						0-404632	-5	-5	-5	26	-20	-15	19	-10	-15	2	44	
56-44.7605-105.1780-2-15-						0-404633	-5	-5	-5	26	-20	22	9	-10	-15	2	46	
56-44.6813-105.2468-2-15-						0-404634	-5	-5	-5	15	-20	-15	-5	-10	-15	1	15	
56-44.6650-105.2319-2-15-						0-404635	-5	-5	-5	15	-20	-15	10	-10	-15	1	15	
56-44.7413-105.2202-2-15-						0-404636	-5	-5	-5	18	-20	20	10	-10	-15	1	22	
56-44.7400-105.1697-2-15-						0-404637	-5	-5	-5	20	-20	16	18	-10	16	2	27	
56-44.6447-105.1258-2-15-						0-404638	-5	-5	-5	17	-20	-15	12	-10	-15	2	24	
56-44.6586-105.1858-2-99-						0-404639	-5	-5	-5	21	-20	-15	10	-10	-15	2	23	
56-44.6808-105.1536-2-15-						0-404640	-5	-5	-5	18	26	16	6	-10	-15	1	26	
56-44.6783-105.1508-2-15-						0-404641	-5	-5	-5	31	-20	-15	22	-10	-15	2	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	LAST 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
56-44.1430-105.1255-2-15	0-404566	47170	-0.10	428	3956	54	33	6.9	50	2.8	4	0.9	8077	11.6	10900	30	0.3					
56-44.1330-105.1616-2-15	0-404567	55547	-0.14	577	4050	51	-28	10.0	48	4.7	3	0.8	10270	7.6	12880	-16	0.3					
56-44.1527-105.1847-2-37	0-404569	38470	-0.08	460	-484	36	-27	10.0	31	2.1	3	0.6	5829	8.6	11770	25	0.3					
56-44.1722-105.1311-2-37	0-404569	63560	-0.12	559	13190	85	97	8.4	51	4.2	4	1.2	18130	9.3	16770	57	0.4					
56-44.0761-105.1363-2-15	0-404571	48630	-0.12	687	6413	56	-52	8.3	41	2.6	4	1.0	10090	9.8	14490	34	0.4					
56-44.0272-105.1547-2-15	0-404573	68530	-0.18	726	18980	70	-45	15.7	54	4.7	5	1.2	19650	5.4	17840	52	0.4					
56-44.0650-105.1627-2-14	0-404574	60770	-0.11	542	7050	61	78	12.1	37	3.4	5	0.8	10660	7.5	17870	40	0.4					
56-44.0505-105.1730-2-15	0-404575	57100	-0.11	551	4608	76	-57	8.9	54	3.6	3	1.1	15610	9.9	15730	50	0.4					
56-44.0461-105.0700-2-15	0-404576	54100	-0.12	648	4766	72	-40	9.0	43	4.0	4	1.0	12710	6.8	16990	37	0.4					
56-44.0166-105.0594-2-15	0-404577	32640	-0.11	539	9812	71	-38	7.4	41	2.4	5	1.1	9636	23.4	15510	52	0.6					
56-44.0377-105.0572-2-15	0-404578	66300	-0.12	617	5894	62	-53	15.1	49	3.7	5	0.9	14520	5.1	18700	-10	0.3					
56-44.1177-105.0044-2-37	0-404582	44880	-0.09	445	6928	70	-42	5.4	43	2.7	4	1.0	11390	13.5	15470	45	0.4					
56-44.9155-105.0966-2-15	0-404583	58030	-0.10	662	7720	53	-73	8.4	60	2.1	3	0.9	12540	4.8	15330	30	0.2					
56-44.9997-105.0161-2-37	0-404584	56720	-0.15	635	6337	64	-66	12.2	56	3.5	4	1.2	14470	8.5	15980	43	0.3					
56-44.9700-105.0255-2-15	0-404585	62190	-0.10	816	8218	54	-80	14.1	55	2.8	4	0.9	11290	7.1	17820	28	0.3					
56-44.9561-105.0372-2-15	0-404586	72100	-0.13	558	9076	59	-79	9.0	58	5.0	4	1.2	18580	5.2	20840	40	0.4					
56-44.9430-105.0288-2-15	0-404587	57450	-0.14	707	20600	70	-83	10.2	45	3.3	3	1.1	16700	5.8	13770	33	0.3					
56-44.9425-105.0311-2-15	0-404588	52960	-0.13	536	36820	57	-68	11.7	39	2.6	4	1.0	13560	7.7	15230	51	0.3					
56-44.9361-105.0611-2-15	0-404593	72660	-0.12	723	8511	46	-81	16.7	49	3.5	4	0.9	17400	3.5	18200	20	0.3					
56-44.9327-105.1500-2-15	0-404604	57270	-0.10	528	29110	59	-73	7.5	64	2.7	3	1.1	14080	7.9	16200	38	0.3					
56-44.2733-105.2450-2-15	0-404611	42770	-0.10	542	-469	64	267	7.2	40	2.2	4	0.8	9359	10.9	13770	25	0.4					
56-44.2572-105.2116-2-14	0-404612	36510	-0.19	552	-518	48	-36	10.0	38	2.1	4	0.7	7436	11.1	14530	-30	0.3					
56-44.2100-105.2138-2-37	0-404613	55160	-0.27	561	2097	54	-30	5.6	53	4.1	3	0.8	8956	7.7	13170	-76	0.4					
56-44.2627-105.1716-2-37	0-404614	32500	-0.27	388	2599	58	-51	8.5	33	1.7	3	0.8	21040	9.9	15830	-66	0.4					
56-44.2338-105.1883-2-15	0-404615	43680	-0.33	531	-479	50	147	10.1	41	3.9	4	1.0	11680	10.4	13460	-73	0.4					
56-44.2316-105.1569-2-14	0-404616	45310	-0.20	527	2116	50	105	10.2	30	3.0	4	0.8	9170	8.4	13970	-31	0.3					
56-44.1627-105.1722-2-15	0-404617	83760	-0.33	555	3619	60	-37	8.6	66	6.6	4	1.2	12850	5.5	14060	-89	0.3					
56-44.8683-105.0922-2-14	0-404618	51800	-0.26	516	18140	52	-97	7.2	38	2.4	3	1.1	9950	5.6	14330	-62	0.6					
56-44.8558-105.0591-2-14	0-404619	50790	-0.34	654	5217	58	-65	10.6	44	2.8	3	1.0	11490	9.4	13390	-81	0.4					
56-44.8702-105.0352-2-14	0-404620	55160	-0.23	643	5789	50	-66	12.7	43	2.7	4	1.0	10720	6.1	12900	-42	0.3					
56-44.8563-105.0066-2-14	0-404621	69870	-0.31	511	15260	73	-64	9.8	70	6.8	4	1.1	17700	6.1	17000	-84	0.4					
56-44.8488-105.0725-2-14	0-404622	66540	-0.30	1771	7576	61	-70	9.4	60	4.1	4	1.2	15530	7.9	15320	-73	0.3					
56-44.8233-105.0713-2-14	0-404623	68190	-0.41	1203	10810	55	-63	14.8	60	5.9	4	1.3	23300	6.5	15820	-98	0.5					
56-44.8180-105.0255-2-14	0-404624	73660	-0.28	1445	8872	53	-66	16.5	54	5.1	5	1.1	19080	5.6	16810	-40	0.4					
56-44.7605-105.0072-2-15	0-404625	51610	-0.23	711	15210	65	-66	8.0	51	3.2	3	1.0	14220	6.0	15480	-59	0.3					
56-44.7625-105.0458-2-14	0-404626	43540	-0.26	558	23250	57	-60	6.5	51	2.3	3	1.1	9188	8.8	15020	-63	0.4					
56-44.7425-105.0616-2-14	0-404627	56050	-0.39	747	24050	67	-76	14.9	54	3.8	4	1.1	17940	6.6	12090	-90	0.4					
56-44.7841-105.0863-2-14	0-404628	58100	-0.24	595	8766	50	-48	12.2	48	3.3	5	0.8	10920	5.9	16980	-40	0.3					
56-44.8111-105.0863-2-14	0-404629	51140	-0.27	631	4481	66	-64	6.1	58	3.7	4	1.1	15090	6.8	17230	-69	0.4					
56-44.8213-105.1041-2-15	0-404630	44290	-0.20	478	6030	39	-57	4.8	28	1.3	2	0.7	6007	4.4	15090	-50	0.2					
56-44.8627-105.1491-2-15	0-404631	68190	-0.44	908	8588	52	-74	17.5	61	5.1	4	1.0	21880	5.4	15630	-97	0.4					
56-44.7905-105.2236-2-15	0-404636	67190	-0.30	434	19470	50	-71	18.3	49	4.9	4	0.8	18400	3.9	17150	-52	0.3					
56-44.7605-105.1780-2-15	0-404638	70670	-0.35	693	25160	64	-73	9.6	52	6.3	4	1.2	17630	4.5	18030	-91	0.3					
56-44.6813-105.2488-2-15	0-404643	27830	-0.20	380	1815	34	39	5.1	27	2.0	3	0.7	5655	8.7	10790	-54	0.3					
56-44.6650-105.2319-2-15	0-404644	30330	-0.23	421	2224	43	-32	6.5	31	2.1	3	0.9	6350	10.1	12450	-54	0.3					
56-44.7413-105.2202-2-15	0-404646	44540	-0.13	500	8131	57	-44	10.1	38	3.3	4	1.0	10370	10.4	16300	40	0.3					
56-44.7400-105.1697-2-15	0-404649	43860	-0.10	473	17360	46	58	10.3	31	2.8	4	0.8	8880	6.7	17800	29	0.3					
56-44.6447-105.1258-2-15	0-404651	49360	-0.18	528	2442	63	-52	6.6	43	4.0	3	1.0	10990	7.5	16750	25	0.3					
56-44.6586-105.1953-2-99	0-404652	50950	-0.11	496	14340	68	-41	7.4	39	3.8	4	1.0	10950	9.0	16250	39	0.4					
56-44.6808-105.1536-2-15	0-404654	51440	-0.14	631	6144	52	-44	10.3	48	4.9	5	1.0	11800	6.4	17260	-17	0.3					
56-44.6783-105.1508-2-15	0-404655	43520	-0.09	497	7492	36	-50	11.8	29	2.9	3	0.7	7333	6.8	13850	17	0.2					

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

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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	
56-44.1430-105.1255-2-15-	0-W04566	6132	91	749	28	-3	5.1	3.8	-133	-1	-1	8.4	3579	55	3.4	64	0.405					
56-44.1330-105.1616-2-15-	0-W04567	7232	94	1054	49	-5	7.6	4.6	-139	-1	-1	8.4	3580	62	-2.9	41	0.366					
56-44.1527-105.1847-2-97-	0-W04569	4773	54	864	31	-3	3.6	2.8	-141	-1	-1	5.8	2747	45	2.3	29	0.448					
56-44.1722-105.1311-2-97-	0-W04569	12250	464	4401	52	-4	8.5	5.9	-251	1	-1	14.6	3152	85	4.2	96	0.281					
56-44.0761-105.1369-2-15-	0-W04571	7654	216	4258	35	-4	5.2	4.1	-208	-1	-1	9.0	3509	62	3.9	105	0.344					
56-44.0272-105.1547-2-15-	0-W04573	15090	462	2396	33	-6	10.3	5.5	-258	-1	-1	11.7	4185	94	-2.9	-57	0.282					
56-44.0650-105.1627-2-14-	0-W04574	15992	200	2262	32	-3	5.2	4.9	-221	-1	-1	11.0	3508	82	4.4	79	0.391					
56-44.0505-105.1730-2-15-	0-W04575	7229	320	4767	56	-4	7.8	4.2	-237	-1	-1	10.4	3233	79	4.7	87	0.327					
56-44.0461-105.0700-2-15-	0-W04576	11430	362	1292	60	-4	5.4	5.7	-223	-1	-1	10.2	3195	77	2.8	63	0.324					
56-44.0166-105.0594-2-15-	0-W04577	7515	299	2770	51	-4	4.9	5.5	-130	-1	-1	13.1	3287	42	3.3	28	0.298					
56-44.0377-105.0572-2-15-	0-W04578	15350	519	1220	48	-4	7.2	4.7	-321	-1	-1	9.7	3870	91	3.0	78	0.340					
56-44.1177-105.0044-2-97-	0-W04592	10110	233	2876	40	-3	5.6	5.4	-179	-1	-1	11.5	2807	54	3.7	67	0.313					
56-44.9155-105.0966-2-15-	0-W04593	11903	412	10900	34	-3	5.5	3.1	-265	-1	-1	7.1	3042	63	2.3	106	0.338					
56-44.9997-105.0161-2-97-	0-W04594	10230	433	7322	55	-5	7.9	3.5	-274	-1	-1	9.2	2993	69	-3.2	85	0.337					
56-44.9700-105.0255-2-15-	0-W04595	10390	445	9231	31	-3	5.9	3.6	-326	-1	-1	7.8	3373	60	3.0	-38	0.385					
56-44.9561-105.0372-2-15-	0-W04596	14660	526	4725	52	-4	9.3	5.5	-313	-1	-1	9.7	2799	79	4.1	108	0.278					
56-44.9430-105.0298-2-15-	0-W04597	14920	1071	5943	-25	-4	7.0	5.2	-429	-1	-1	8.1	2327	69	-2.9	600	0.346					
56-44.9425-105.0311-2-15-	0-W04599	20110	396	7498	50	-4	5.6	4.6	-256	-1	-1	9.0	3164	59	3.5	85	0.289					
56-44.9361-105.0611-2-15-	0-W04599	14720	629	5616	-22	-4	7.4	3.7	-332	-1	-1	7.5	3407	79	3.1	91	0.387					
56-44.9327-105.1500-2-15-	0-W04604	23520	386	9252	41	-3	7.0	4.1	-246	-1	-1	8.2	2787	63	3.1	60	0.390					
56-44.2733-105.2450-2-15-	0-W04611	5577	160	2241	43	-3	4.7	3.6	-174	-1	-1	8.7	3251	60	3.1	66	0.368					
56-44.2572-105.2116-2-14-	0-W04612	5229	133	2549	-16	-6	3.9	3.9	-150	-1	-1	8.5	2837	58	-2.5	-43	0.353					
56-44.2100-105.2138-2-97-	0-W04613	7367	62	836	-30	-8	5.8	4.6	-158	-1	-1	8.2	3678	64	4.9	-40	0.354					
56-44.2627-105.1716-2-97-	0-W04614	4061	609	2868	-23	-8	3.5	-3.3	-263	-1	-1	7.7	2147	42	-3.4	-76	0.351					
56-44.2338-105.1883-2-15-	0-W04615	6106	176	2758	-31	-9	5.3	-3.8	-168	-1	-1	9.1	3117	62	4.5	101	0.374					
56-44.2316-105.1569-2-14-	0-W04616	5557	156	2662	32	-6	4.6	5.2	-157	-1	-1	6.5	2873	58	2.5	44	0.508					
56-44.1627-105.1722-2-15-	0-W04617	11730	94	324	57	-10	10.6	6.9	-196	-1	-1	11.5	4262	101	8.5	-83	0.330					
56-44.8683-105.0922-2-14-	0-W04619	21770	309	10670	-26	-8	4.6	-3.1	-262	-1	-1	6.8	2045	55	-3.3	-39	0.441					
56-44.8558-105.0591-2-14-	0-W04619	8109	203	8550	-32	-10	5.0	-4.2	-215	-1	-1	8.2	3454	52	-4.8	52	0.317					
56-44.8702-105.0352-2-14-	0-W04620	11650	258	7692	30	-7	5.5	4.3	-235	-1	-1	6.6	2835	67	4.1	41	0.394					
56-44.8563-105.0066-2-14-	0-W04621	15840	421	3297	-32	-5	3.0	5.3	-308	-1	-1	11.7	3020	72	5.8	99	0.291					
56-44.8488-105.0725-2-14-	0-W04622	16370	299	8249	-31	-9	5.8	6.9	-236	-1	-1	8.7	2688	103	7.9	-63	0.366					
56-44.8233-105.0713-2-14-	0-W04623	18920	351	6071	-39	-13	10.6	6.8	-255	-1	-1	10.7	3498	126	-5.5	76	0.280					
56-44.8180-105.0255-2-14-	0-W04624	19400	382	6226	50	-9	8.6	-3.1	-267	-1	-1	9.2	3541	140	5.4	46	0.337					
56-44.7605-105.0072-2-15-	0-W04625	15570	371	6523	51	-7	5.6	5.4	-266	-1	-1	8.4	3005	62	4.5	94	0.321					
56-44.7625-105.0458-2-14-	0-W04626	15820	307	6031	-25	-7	4.5	-3.1	-215	-1	-1	7.9	2164	46	-4.1	64	0.367					
56-44.7825-105.0616-2-14-	0-W04627	16150	629	7569	-37	-12	7.9	6.8	-326	-1	-1	8.5	3113	65	-6.1	83	0.306					
56-44.7841-105.0863-2-14-	0-W04629	16410	203	3759	42	-7	5.2	4.3	-202	-1	-1	7.7	3165	70	-2.9	53	0.403					
56-44.8111-105.0863-2-14-	0-W04629	11150	263	5509	35	-8	7.7	-3.3	-255	-1	-1	9.1	2977	62	-3.7	-93	0.319					
56-44.8213-105.1041-2-15-	0-W04630	5096	182	7958	39	-6	3.0	-2.4	-169	-1	-1	4.9	1586	33	-2.8	42	0.367					
56-44.8627-105.1491-2-15-	0-W04631	19660	319	8745	83	-13	10.5	-4.7	-267	-2	-1	9.7	3916	121	-5.8	132	0.392					
56-44.7905-105.2235-2-15-	0-W04636	20530	1146	2625	-28	-9	7.2	-3.3	-438	-1	-1	7.7	3342	78	-4.1	-79	0.610					
56-44.7605-105.1780-2-15-	0-W04638	23890	465	4252	-37	-11	8.8	5.1	-362	-1	-1	9.9	3346	69	7.4	-100	0.293					
56-44.6813-105.2488-2-15-	0-W04643	3545	115	1234	-21	-6	2.7	-2.5	-122	-1	-1	5.7	1832	34	-2.5	23	0.439					
56-44.6650-105.2319-2-15-	0-W04644	4646	129	2463	-23	-7	3.7	-3.0	-130	-1	-1	7.0	2183	36	4.3	54	0.357					
56-44.7413-105.2202-2-15-	0-W04646	11560	232	3498	40	-4	5.6	5.5	-181	-1	-1	9.1	2960	47	3.0	58	0.319					
56-44.7400-105.1697-2-15-	0-W04649	18570	258	3042	-15	-3	4.3	3.4	-218	-1	-1	7.0	2665	47	2.3	56	0.400					
56-44.6447-105.1258-2-15-	0-W04651	7017	343	3326	44	-3	5.9	4.2	-226	-1	-1	8.6	2649	52	4.1	92	0.302					
56-44.6586-105.1858-2-99-	0-W04652	16120	270	1041	28	-4	5.7	5.2	-210	-1	-1	9.3	3267	60	3.5	59	0.376					
56-44.6808-105.1536-2-15-	0-W04654	8313	270	2608	48	-4	5.7	4.4	-207	-1	-1	8.4	3240	56	3.6	-57	0.321					
56-44.6783-105.1508-2-15-	0-W04655	7201	292	2366	32	-3	3.7	2.8	-253	-1	-1	6.4	2708	38	-1.6	114	0.406					

[illegible]

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

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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	
56-44.6977-105.0936-2-15-						0-W04457	-5	-5	-5	14	-20	-15	15	-10	-15	1	44	
56-44.7083-105.0888-2-99-						0-W04450	-5	-5	-5	24	-20	17	13	-10	-15	1	39	
56-44.7319-105.1155-2-97-						0-W04460	-5	-5	-5	26	-20	21	7	-10	-15	2	23	
56-44.6686-105.0188-2-15-						0-W04461	-5	-5	-5	25	-20	-15	10	-10	-15	1	23	
56-44.7025-105.0247-2-15-						0-W04462	-5	-5	-5	16	-20	18	11	-10	-15	2	29	
56-44.7352-105.0422-2-15-						0-W04465	-5	-5	-5	26	-20	17	15	-10	-15	1	43	
56-44.3938-105.8022-2-15-						0-W04468	-5	-5	-5	35	-20	-15	14	10	-15	2	41	
56-44.3791-105.8069-2-15-						0-W04469	-5	-5	-5	23	-20	-15	8	-10	-15	2	32	
56-44.3775-105.7902-2-15-						0-W04471	-5	-5	-5	26	-20	15	8	-10	-15	2	31	
56-44.1444-105.9055-2-15-						0-W04473	-5	-5	-5	18	-20	-15	17	-10	-15	2	18	
56-44.1519-105.9050-2-15-						0-W04475	-5	-5	-5	15	-20	-15	6	-10	-15	2	29	
56-44.1733-105.8658-2-15-						0-W04479	-5	-5	-5	19	-20	16	12	-10	-15	1	24	
56-44.1577-105.7858-2-15-						0-W04483	-5	-5	-5	35	-20	15	28	-10	-15	2	45	
56-44.1530-105.7735-2-97-						0-W04484	-5	-5	-5	25	-20	22	10	-10	-15	-1	27	
56-44.1863-105.8458-2-15-						0-W04488	-5	-5	-5	36	-20	26	15	-10	-15	2	29	
56-44.2263-105.7991-2-15-						0-W04490	-5	-5	-5	25	-20	-15	12	11	-15	1	37	
56-44.1133-105.8666-2-11-						0-W04493	-5	-5	-5	25	-20	-15	7	-10	-15	2	43	
56-44.0950-105.8227-2-15-						0-W04495	-5	-5	-5	22	-20	-15	13	-10	-15	2	37	
56-44.0791-105.7911-2-15-						0-W04496	-5	-5	-5	31	-20	16	19	-10	-15	2	51	
56-44.0694-105.7577-2-11-						0-W04497	-5	-5	-5	40	-20	16	10	-10	-15	2	43	
56-44.0327-105.7811-2-11-						0-W04499	-5	-5	-5	34	-20	-15	-5	-10	-15	-1	33	
56-44.0011-105.7894-2-97-						0-W04700	-5	-5	-5	33	-20	-15	16	-10	-15	2	45	
56-44.0069-105.8505-2-15-						0-W04702	-5	-5	-5	23	-20	20	5	-10	-15	1	24	
56-44.0241-105.8419-2-15-						0-W04703	-5	-5	-5	19	-20	21	9	-10	-15	1	29	
56-44.0244-105.8255-2-15-						0-W04704	-5	-5	-5	18	-20	20	11	-10	-15	1	37	
56-44.0783-105.9647-2-15-						0-W04711	-5	-5	-5	22	-20	-15	8	-10	-15	2	37	
56-44.0847-105.9866-2-15-						0-W04713	-5	-5	-5	22	-20	19	7	-10	-15	2	29	
56-44.0402-105.9955-2-15-						0-W04717	-5	-5	-5	28	-20	21	16	-10	-15	2	42	
56-44.1725-105.9316-2-15-						0-W04722	-5	-5	-5	19	-20	-15	10	-10	-15	1	26	
56-44.1883-105.9366-2-15-						0-W04723	-5	-5	-5	29	-20	-15	14	-10	-15	2	33	
56-44.1938-105.9727-2-15-						0-W04725	-5	-5	-5	22	-20	-15	15	-10	-15	-1	40	
56-44.2105-105.9983-2-15-						0-W04727	-5	-5	-5	31	-20	-15	7	-10	-15	-1	42	
56-44.1994-105.9625-2-15-						0-W04728	-5	-5	-5	26	-20	-15	6	-10	-15	1	26	
56-44.0738-105.3994-2-14-						0-W04723	-5	-5	-5	18	-20	-15	8	-10	-15	1	25	
56-44.0972-105.3933-2-15-						0-W04734	-5	-5	-5	27	-20	-15	13	-10	-15	1	39	
56-44.1022-105.4736-2-15-						0-W04740	-5	-5	-5	23	-20	-15	10	-10	-15	1	45	
56-44.0205-105.2946-2-15-						0-W04743	-5	-5	-5	28	-20	-15	10	-10	-15	2	47	
56-44.0480-105.2833-2-15-						0-W04744	-5	-5	-5	22	-20	-15	12	-10	-15	2	23	
56-44.0327-105.3522-2-15-						0-W04745	-5	-5	-5	25	-20	-15	-5	-10	-15	2	19	
56-44.0433-105.3211-2-15-						0-W04746	-5	-5	-5	21	-20	-15	9	-10	-15	2	28	
56-44.0961-105.2555-2-15-						0-W04749	-5	-5	-5	23	-20	-15	-5	-10	-15	2	20	
56-44.7381-104.7819-2-15-						0-W04749	-5	-5	-5	19	-20	21	10	-10	-15	2	32	
56-44.7006-104.7547-2-12-						0-W04750	-5	-5	-5	24	-20	29	10	-10	-15	2	36	
56-44.6728-104.7686-2-15-						0-W04751	-5	-5	-5	22	-20	-15	5	-10	-15	2	15	
56-44.7158-104.8486-2-12-						0-W04752	-5	-5	-5	25	-20	-15	10	-10	-15	1	60	
56-44.7353-104.8839-2-15-						0-W04753	-5	-5	-5	33	-20	17	8	-10	-15	2	44	
56-44.6975-104.9017-2-12-						0-W04754	-5	-5	-5	37	-20	39	8	-10	-15	2	48	
56-44.7281-104.9100-2-15-						0-W04755	-5	-5	-5	29	-20	31	5	-10	-15	2	50	
56-44.7700-104.9700-2-15-						0-W04757	-5	-5	-5	31	-20	24	6	-10	-15	2	36	
56-44.7031-104.9917-2-15-						0-W04760	-5	-5	-5	21	-20	-15	8	-10	-15	2	52	
56-44.6803-104.9872-2-15-						0-W04761	-5	-5	-5	21	-20	-15	10	-10	-15	2	27	

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
56-44.6977-105.0835-2-15-	0-W04657	65280	-0.11	519	4086	53	-46	6.4	49	5.2	4	1.1	14550	5.9	19780	37	0.3					
56-44.7083-105.0888-2-99-	0-W04652	61470	-0.13	554	21450	63	-52	9.4	40	4.4	4	1.0	11240	6.4	20270	-13	0.4					
56-44.7319-105.1155-2-97-	0-W04650	56500	-0.14	529	8526	65	-37	10.7	47	4.9	4	1.0	15440	7.6	17890	47	0.4					
56-44.6686-105.0188-2-15-	0-W04661	50560	-0.10	661	22300	44	-74	12.1	37	2.3	4	0.9	9332	6.8	15200	36	0.3					
56-44.7025-105.0247-2-15-	0-W04662	54900	-0.10	519	24360	62	-65	7.2	58	3.1	3	1.0	13260	8.1	15280	38	0.4					
56-44.7352-105.0422-2-15-	0-W04665	57200	-0.12	611	17050	55	-59	8.4	42	3.3	4	1.1	12990	5.0	17160	29	0.3					
56-44.3938-105.8022-2-15-	0-W04668	65420	-0.15	612	18940	68	71	14.0	57	7.0	4	1.3	20020	6.3	18120	43	0.5					
56-44.3791-105.8069-2-15-	0-W04660	48730	-0.09	559	19310	49	101	11.4	32	3.0	4	1.0	10020	7.0	18110	38	0.3					
56-44.3775-105.7902-2-15-	0-W04671	54670	-0.09	443	22410	64	82	6.9	41	3.9	4	1.0	13270	8.1	16900	34	0.4					
56-44.1444-105.9055-2-15-	0-W04673	37730	-0.08	610	9654	62	48	6.3	31	2.0	4	0.9	9247	10.4	15160	28	0.4					
56-44.1519-105.9050-2-15-	0-W04675	51610	-0.12	636	16170	59	-40	12.8	40	4.5	4	1.2	14820	5.7	17270	36	0.3					
56-44.1733-105.8658-2-15-	0-W04670	48410	-0.09	643	19390	50	-48	11.6	35	2.9	4	1.0	10610	7.3	16890	32	0.4					
56-44.1577-105.7868-2-15-	0-W04693	63940	-0.10	481	20240	62	97	8.6	47	5.5	4	1.2	16680	5.3	18190	40	0.3					
56-44.1530-105.7736-2-97-	0-W04686	41240	-0.09	592	14860	63	57	7.7	30	2.8	4	1.1	10310	9.0	15650	33	0.4					
56-44.1863-105.8458-2-15-	0-W04688	45760	-0.12	588	19660	47	56	11.0	38	4.3	3	1.0	12730	4.5	16700	-12	0.2					
56-44.2263-105.7931-2-15-	0-W04690	48760	-0.08	604	20070	47	74	10.0	33	2.6	4	0.9	9971	5.4	17100	30	0.3					
56-44.1138-105.8666-2-11-	0-W04693	57490	-0.10	499	16310	65	126	8.7	47	4.3	3	1.0	13840	5.5	17780	35	0.3					
56-44.0950-105.8227-2-15-	0-W04695	54320	-0.10	619	13110	64	36	7.9	41	3.7	4	0.9	12420	6.0	16790	34	0.3					
56-44.0791-105.7911-2-15-	0-W04696	77660	-0.17	566	21330	71	-39	15.9	74	8.5	5	1.3	22320	4.4	18200	46	0.4					
56-44.0694-105.7577-2-11-	0-W04697	61350	-0.10	547	21670	49	100	12.5	45	3.6	4	0.9	16820	4.3	16720	37	0.3					
56-44.0327-105.7811-2-11-	0-W04699	40160	-0.11	-170	118900	38	164	14.4	49	3.2	2	0.8	31540	2.2	9144	31	0.2					
56-44.0011-105.7894-2-97-	0-W04700	60940	-0.11	633	16030	57	40	9.3	46	4.1	4	1.0	14600	4.7	16870	34	0.3					
56-44.0069-105.8505-2-15-	0-W04702	40920	-0.11	592	19200	61	-44	10.4	28	3.9	4	1.2	11240	8.4	17120	36	0.3					
56-44.0241-105.8419-2-15-	0-W04703	46020	-0.08	599	15240	54	-48	10.4	31	2.6	4	1.0	10070	7.4	16190	34	0.3					
56-44.0244-105.8255-2-15-	0-W04704	56580	-0.10	472	22620	64	86	8.2	51	4.5	4	1.2	14900	6.9	15230	44	0.4					
56-44.0783-105.9647-2-15-	0-W04711	50170	-0.10	595	15800	61	-39	8.1	45	4.3	4	1.1	12090	5.5	16060	37	0.3					
56-44.0847-105.9866-2-15-	0-W04713	42150	-0.11	564	17010	62	47	10.6	39	3.5	4	1.2	12240	9.7	15950	49	0.3					
56-44.0402-105.9955-2-15-	0-W04717	53680	-0.09	562	26770	53	-48	11.6	36	3.2	5	0.8	12420	5.9	16830	34	0.4					
56-44.1725-105.9316-2-15-	0-W04722	41020	-0.08	474	12240	46	62	5.4	29	2.3	3	0.9	9544	6.3	16520	31	0.3					
56-44.1883-105.9366-2-15-	0-W04723	50630	-0.10	607	13860	60	-37	8.6	42	3.6	4	1.1	11870	5.4	16530	33	0.4					
56-44.1938-105.9727-2-15-	0-W04725	51490	-0.16	602	9902	64	-38	15.0	40	5.0	4	1.4	15130	8.4	16870	-14	0.4					
56-44.2105-105.9983-2-15-	0-W04727	52010	-0.29	616	15980	47	66	42.3	30	5.5	4	1.4	11240	4.5	15540	-31	-0.3					
56-44.1994-105.9625-2-15-	0-W04728	52490	-0.25	566	18780	57	-39	9.1	47	4.1	3	0.9	12330	6.6	17570	-33	-0.3					
56-44.0738-105.3994-2-14-	0-W04733	44290	-0.34	640	3719	64	66	23.2	-26	-3.2	4	1.6	8632	8.8	17250	-49	-0.4					
56-44.0972-105.3933-2-15-	0-W04734	59840	-0.52	645	5294	62	-44	50.7	-41	10.4	5	2.0	14470	9.2	20550	-78	-0.6					
56-44.1022-105.4736-2-15-	0-W04743	48040	-0.32	534	19250	64	235	48.1	43	7.2	4	1.5	12320	5.3	12930	-44	-0.4					
56-44.0205-105.2966-2-15-	0-W04742	37330	-0.26	458	18450	64	64	16.4	68	9.5	3	1.8	19980	4.1	16740	51	0.5					
56-44.0480-105.2833-2-15-	0-W04744	49880	-0.12	537	3276	57	-35	8.8	41	3.0	4	1.0	12350	7.7	12970	32	0.3					
56-44.0327-105.3522-2-15-	0-W04745	55920	-0.15	634	3422	54	-29	12.2	68	4.2	4	1.1	10920	9.0	11760	49	0.4					
56-44.0433-105.3211-2-15-	0-W04746	55250	-0.09	526	4197	45	-32	10.9	40	2.9	4	0.8	9566	7.2	14320	28	0.2					
56-44.0961-105.2555-2-15-	0-W04748	40290	-0.08	445	3804	45	-21	4.9	39	2.4	3	0.8	6597	6.5	12340	26	0.2					
56-44.7381-104.7819-2-15-	0-W04749	47640	-0.08	479	-864	57	-59	10.1	39	2.8	3	1.0	22710	6.4	10780	32	0.4					
56-44.7005-104.7567-2-12-	0-W04750	48620	-0.09	410	4047	82	-75	13.8	52	2.6	4	1.2	22460	10.6	13040	38	0.5					
56-44.6728-104.7686-2-15-	0-W04751	28270	-0.08	319	-542	49	-44	11.1	32	-1.5	3	0.7	15050	9.6	8620	33	0.3					
56-44.7158-104.8486-2-12-	0-W04752	61180	-0.08	615	8859	59	-87	17.2	41	3.8	4	0.9	25150	6.0	13090	32	0.4					
56-44.7353-104.8839-2-15-	0-W04753	64790	-0.09	496	6010	70	-60	10.0	51	4.6	5	1.2	28880	6.5	17020	41	0.4					
56-44.6975-104.9017-2-12-	0-W04754	61330	-0.09	784	5634	88	-66	14.3	54	4.2	5	1.2	29040	6.7	12290	47	0.5					
56-44.7281-104.9100-2-15-	0-W04755	60600	-0.11	608	5934	67	-57	14.1	55	4.5	5	1.3	21480	6.6	15540	39	0.4					
56-44.7700-104.9700-2-15-	0-W04759	66610	-0.07	626	12260	46	-73	13.1	50	3.3	4	0.8	17150	3.8	16080	27	0.3					
56-44.7031-104.9917-2-15-	0-W04760	70570	-0.08	535	17680	64	-67	9.2	89	4.5	3	1.0	20620	5.5	17560	39	0.4					
56-44.6803-104.9872-2-15-	0-W04761	51950	-0.08	550	32270	52	-79	9.9	69	2.7	3	1.1	15880	5.8	13440	29	0.3					

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

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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		
56-44.6977-105.0936-2-15-	0-404657	10580	164	2235	52	-4	7.3	5.6	-184	-1	-1	9.3	2783	66	4.3	80	0.312						
56-44.7083-105.0888-2-99-	0-404658	13750	230	3161	36	-4	6.6	3.3	-229	-1	-1	8.7	2986	72	-2.2	49	0.391						
56-44.7319-105.1155-2-97-	0-404659	14750	342	1552	59	-5	7.9	4.3	-215	-1	-1	10.3	3247	61	-2.6	-36	0.291						
56-44.6686-105.0188-2-15-	0-404661	20070	387	7237	27	-3	4.6	3.5	-299	-1	-1	6.3	3259	51	3.9	77	0.540						
56-44.7025-105.0247-2-15-	0-404662	19630	363	7041	-16	-3	6.8	5.0	-227	-1	-1	8.2	2941	65	2.8	67	0.354						
56-44.7352-105.0422-2-15-	0-404665	22540	255	5791	33	-4	6.6	4.9	-230	-1	-1	7.5	3291	65	2.1	53	0.373						
56-44.3938-105.8022-2-15-	0-404669	18390	324	1466	70	-5	9.5	4.8	277	-1	-1	12.2	3247	87	2.7	110	0.369						
56-44.3791-105.8069-2-15-	0-404669	15130	308	2226	37	-3	5.0	4.2	-222	-1	-1	8.2	2766	63	3.1	58	0.451						
56-44.3775-105.7902-2-15-	0-404671	17010	314	2701	43	-3	6.7	4.7	-197	-1	-1	10.0	2532	69	3.9	-20	0.340						
56-44.1444-105.9055-2-15-	0-404673	8894	314	3115	-13	-3	4.1	3.9	-186	-1	-1	8.7	2994	50	4.1	40	0.414						
56-44.1519-105.9050-2-15-	0-404675	14000	294	2535	47	-4	7.2	5.5	-185	-1	-1	9.2	2569	71	4.0	96	0.435						
56-44.1733-105.8658-2-15-	0-404679	13000	387	2268	36	-3	4.8	3.7	-245	-1	-1	8.5	3256	67	3.7	40	0.447						
56-44.2263-105.7858-2-15-	0-404683	16240	331	1482	58	-3	8.2	4.4	-194	-1	-1	10.8	2628	88	3.1	82	0.370						
56-44.1530-105.7736-2-97-	0-404684	12330	358	1761	28	-3	4.8	4.0	-192	-1	-1	9.3	3015	56	3.3	50	0.430						
56-44.1863-105.8458-2-15-	0-404688	16820	272	1522	51	-4	6.2	3.1	-175	-1	-1	8.2	2643	60	-2.1	59	0.341						
56-44.2263-105.7991-2-15-	0-404690	15440	349	1503	41	-3	4.8	3.7	-221	-1	-1	8.1	2823	51	2.6	-18	0.407						
56-44.1138-105.8666-2-11-	0-404693	18000	203	3769	29	-3	7.3	4.3	293	-1	-1	10.7	2661	71	3.0	-54	0.318						
56-44.0950-105.8227-2-15-	0-404695	14800	306	1863	50	-3	6.1	5.8	-195	-1	-1	10.0	3193	77	4.1	106	0.400						
56-44.0791-105.7911-2-15-	0-404696	21190	322	1248	72	-6	12.0	5.2	-217	-1	-1	14.3	3721	122	-2.8	-87	0.357						
56-44.0694-105.7577-2-11-	0-404697	17510	436	2629	41	-3	6.4	4.7	-271	-1	-1	8.8	2573	80	2.9	73	0.614						
56-44.0327-105.7811-2-11-	0-404699	14470	1415	1849	-22	-3	5.5	2.7	908	-1	-1	7.9	-952	62	2.4	-51	0.620						
56-44.0011-105.7894-2-97-	0-404700	16860	356	2475	42	-4	7.0	4.9	-219	-1	-1	9.7	3125	89	3.2	-22	0.443						
56-44.0069-105.8505-2-15-	0-404702	10030	283	3156	56	-3	5.7	-1.2	-131	-1	-1	8.1	2591	49	3.3	51	0.457						
56-44.0241-105.8419-2-15-	0-404703	12900	294	3257	34	-3	4.5	4.7	-212	-1	-1	8.0	2681	57	3.3	39	0.438						
56-44.0244-105.8255-2-15-	0-404704	16850	364	2205	49	-3	7.1	4.5	-204	-1	-1	10.2	2877	75	3.0	69	0.412						
56-44.0783-105.9647-2-15-	0-404711	16220	295	2301	47	-3	5.7	4.4	-190	-1	-1	9.8	3039	67	2.5	88	0.388						
56-44.0847-105.9866-2-15-	0-404713	13360	274	2233	44	-3	6.0	5.0	-170	-1	-1	10.5	2511	53	3.3	86	0.343						
56-44.0402-105.9955-2-15-	0-404717	19120	375	2579	46	-3	5.5	4.6	-242	-1	-1	8.7	2962	68	2.3	53	0.402						
56-44.1725-105.9316-2-15-	0-404722	10830	245	2289	33	-2	4.7	3.3	-165	-1	-1	9.4	2108	49	3.0	51	0.298						
56-44.1883-105.9366-2-15-	0-404723	14600	310	1867	42	-3	5.8	4.8	-193	-1	-1	8.9	2615	75	2.4	80	0.382						
56-44.1938-105.9727-2-15-	0-404725	11990	308	2259	57	-5	7.6	4.3	-189	-1	-1	11.8	2668	66	3.9	-81	0.263						
56-44.2105-105.9983-2-15-	0-404727	14340	293	2295	-54	-8	5.4	-2.6	-221	-2	-2	8.2	2681	69	-5.3	223	0.476						
56-44.1994-105.9625-2-15-	0-404728	16700	284	2142	-41	-8	6.5	5.2	-178	-2	-1	9.2	2644	75	-4.3	-59	0.467						
56-44.0738-105.3994-2-14-	0-404733	7795	186	4191	-59	-10	4.6	5.0	-181	-2	-2	11.2	2777	52	-6.2	170	0.268						
56-44.0972-105.3933-2-15-	0-404734	12650	349	2514	-95	-16	8.5	-5.2	-227	-4	-3	11.2	3157	84	-9.5	-176	0.313						
56-44.1022-105.4735-2-15-	0-404740	18270	436	16060	-66	-10	6.2	4.2	-331	-3	-2	10.5	2307	75	-5.9	-98	0.514						
56-44.0205-105.2966-2-15-	0-404743	16470	393	1887	94	-9	13.5	5.1	319	-1	-1	12.9	3199	130	-5.8	162	0.450						
56-44.0460-105.2833-2-15-	0-404744	7262	261	2069	-19	-4	6.2	3.7	-185	-1	-1	9.0	3126	80	-2.5	62	0.356						
56-44.0327-105.3522-2-15-	0-404745	6813	98	373	49	-5	9.0	4.0	-146	-1	-1	13.3	3586	88	-2.5	136	0.301						
56-44.0433-105.3211-2-15-	0-404746	7395	207	1064	33	-3	5.7	3.5	-191	-1	-1	7.3	3203	78	3.1	-14	0.411						
56-44.0961-105.2555-2-15-	0-404748	3860	63	703	32	-3	4.9	2.5	-110	-1	-1	7.0	2602	48	2.4	-19	0.357						
56-44.7381-104.7819-2-15-	0-404749	6608	955	2022	-23	-2	7.2	4.8	-337	-1	-1	8.3	2702	66	2.7	102	0.469						
56-44.7006-104.7567-2-12-	0-404750	6609	1460	2344	-25	-3	7.0	5.8	-451	-1	-1	10.5	4401	72	4.1	93	0.466						
56-44.6728-104.7586-2-15-	0-404751	3663	470	2487	-25	-3	4.4	2.9	-231	-1	-1	6.2	3052	53	3.8	49	0.605						
56-44.7158-104.8485-2-12-	0-404752	10930	1443	2263	40	-2	8.3	5.1	-496	-1	-1	9.8	3446	90	3.5	95	0.357						
56-44.7353-104.8839-2-15-	0-404753	10070	711	2418	55	-3	9.7	6.8	-309	-1	-1	11.4	3089	90	3.6	68	0.339						
56-44.6975-104.9017-2-12-	0-404754	11000	1215	2289	39	-3	9.2	6.7	-402	-1	2	10.9	3850	100	6.4	-85	0.410						
56-44.7281-104.9100-2-15-	0-404755	13210	492	4255	86	-3	9.5	5.1	-265	-1	-1	9.6	3595	103	-2.1	78	0.515						
56-44.7700-104.9700-2-15-	0-404759	16970	273	7191	-20	-2	7.4	3.9	-273	-1	-1	7.5	3741	103	2.4	78	0.412						
56-44.7031-104.9917-2-15-	0-404760	22490	329	6131	47	-3	10.4	4.9	-237	-1	-1	9.1	3595	113	3.2	96	0.366						
56-44.6803-104.9872-2-15-	0-404761	21680	717	7544	-23	-2	6.6	3.8	-337	-1	-1	7.2	2777	70	2.4	71	0.371						

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

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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)	SONTILLOMETER (uL/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																										
56-44.6908-104.9306-2-15-						0-W04744-08/21/77-15-			26-							11-1-7-4-7-	-1-	-1-4-3-1-2-	-3-														2.44	
56-44.6400-104.9275-2-15-						0-W04748-08/21/77-18-			23-							13-1-7-5-6-	-1-	-1-4-3-2-2-	-3-														5.04	
56-44.6247-104.9300-2-15-						0-W04749-08/21/77-18-			22-							23-1-7-5-6-	-1-	-1-4-3-2-2-	-3-														7.17	
56-44.6300-104.9711-2-99-						0-W04770-08/21/77-19-			22-							18-1-7-5-7-	-1-	-3-3-2-2-	-3-														3.24	
56-44.6311-104.9833-2-11-						0-W04771-08/21/77-19-			20-	21.0	-C-		7.2	200-		11-1-6-4-6-1-3-2-	-4-3-2-2-	-3-															3.52	
56-44.5778-104.9661-2-15-						0-W04773-08/22/77-11-			26-							11-1-7-5-6-	-1-	-1-3-4-2-2-	-3-														2.49	
56-44.5764-104.9947-2-15-						0-W04774-08/22/77-12-			26-							11-1-7-5-6-	-1-	-1-4-4-3-2-	-3-														5.13	
56-44.5650-104.9628-2-15-						0-W04775-08/22/77-12-			26-							11-1-7-5-6-	-1-	-1-4-3-2-2-	-3-														3.30	
56-44.5025-104.9408-2-15-						0-W04777-08/22/77-13-			27-							16-1-7-5-6-	-1-	-2-4-3-2-2-	-3-														2.82	
56-44.5106-104.9236-2-15-						0-W04778-08/22/77-13-			27-							11-1-7-5-7-	-1-	-1-4-3-2-2-	-3-														3.06	
56-44.5839-104.9306-2-15-						0-W04779-08/22/77-14-			27-							11-1-7-5-7-	-1-	-1-4-3-2-2-	-3-														4.02	
56-44.5806-104.9097-2-15-						0-W04780-08/22/77-14-			27-							9-1-7-5-6-	-1-	-1-4-3-2-2-	-3-														5.90	
56-44.5531-104.8983-2-15-						0-W04781-08/22/77-15-			26-							9-1-7-4-7-	-1-	-1-4-3-1-2-	-3-														3.16	
56-44.6539-104.7764-2-15-						0-W04782-08/23/77-9-			20-							15-1-7-4-7-	-1-	-1-1-3-3-2-	-3-														3.07	
56-44.6486-104.7575-2-15-						0-W04784-08/23/77-9-			20-							13-1-7-5-6-	-1-	-1-2-3-3-2-	-3-														4.37	
56-44.5808-104.8931-2-15-						0-W04785-08/23/77-14-			24-							11-1-7-5-7-	-1-	-1-3-3-2-2-	-3-														2.62	
56-44.5964-104.8989-2-15-						0-W04786-08/23/77-15-			24-							11-1-7-5-7-	-1-	-1-4-3-2-2-	-3-														2.96	
56-44.6236-104.8906-2-15-						0-W04787-08/23/77-16-			22-							16-1-7-5-7-	-1-	-2-3-3-2-2-	-2-														3.52	
56-44.5058-104.8961-2-15-						0-W04791-08/23/77-18-			24-							9-1-7-5-7-	-1-	-2-4-3-1-1-	-3-														3.98	
56-44.5142-104.8886-2-15-						0-W04792-08/23/77-19-			23-							6-1-7-6-8-	-1-	-6-3-2-1-	-3-														6.59	
56-44.5217-104.8567-2-15-						0-W04793-08/23/77-20-			22-							13-1-7-5-7-	-1-	-1-4-3-1-1-	-3-														4.80	
56-44.5156-104.8339-2-15-						0-W04794-08/24/77-10-			22-							9-1-7-5-7-	-1-	-1-4-3-2-1-	-3-														3.52	
56-44.5039-104.8383-2-15-						0-W04796-08/24/77-11-			22-							13-1-7-5-7-	-1-	-2-4-3-1-1-	-3-														3.82	
56-44.5814-104.8203-2-15-						0-W04799-08/24/77-			23-							11-1-1-5-6-	-1-	-2-3-4-3-2-	-3-														3.24	
56-44.5950-104.8219-2-15-						0-W04800-08/24/77-13-			24-							11-1-1-5-8-	-1-	-1-3-4-2-2-	-3-														3.02	
56-44.6089-104.8181-2-99-						0-W04801-08/24/77-14-			23-							8-1-6-5-6-	-1-	-1-3-2-2-	-3-														4.31	
56-44.5889-104.8611-2-11-						0-W04802-08/24/77-15-			22-	23.0	-C-		6.8	850-		13-1-7-5-7-1-2-1-	-4-3-2-2-	-3-															2.81	
56-44.6361-104.8656-2-15-						0-W04803-08/24/77-16-			28-							6-1-7-5-7-	-1-	-2-1-3-2-3-	-3-														4.71	
56-44.6483-104.8583-2-15-						0-W04804-08/24/77-17-			26-							9-1-7-5-7-	-1-	-2-1-3-1-2-	-2-														4.42	
56-44.6433-104.8989-2-15-						0-W04805-08/24/77-18-			24-							16-1-7-5-8-	-1-	-1-4-3-2-2-	-3-														8.17	
56-44.6725-104.8389-2-15-						0-W04806-08/24/77-20-			23-							13-1-7-5-7-	-1-	-1-4-3-2-3-	-3-														6.11	
56-44.6792-104.8383-2-15-						0-W04807-08/24/77-20-			23-							9-1-7-5-7-	-1-	-4-3-3-3-	-3-														5.17	
56-44.6914-104.8550-2-15-						0-W04808-08/24/77-20-			23-							11-1-7-4-7-	-1-	-2-3-3-2-3-	-3-														4.76	
56-44.5733-104.8064-2-15-						0-W04809-08/25/77-12-			27-							9-1-7-5-6-	-1-	-2-1-3-3-2-	-3-														1.89	
56-44.5614-104.7975-2-12-						0-W04810-08/25/77-12-			27-	24.0			7.1	1200-		9-1-6-5-8-2-2-1-1-4-3-3-2-	-3-																3.01	
56-44.6153-104.7981-2-99-						0-W04812-08/25/77-18-			26-							4-1-7-6-6-	-1-	-2-4-3-3-	-3-														3.86	
56-44.5094-104.7581-2-15-						0-W04814-08/28/77-13-			24-							11-1-7-5-6-	-1-	-2-1-3-3-2-	-3-														2.32	
56-44.5967-104.7644-2-15-						0-W04815-08/28/77-16-			21-							9-1-7-5-6-	-1-	-2-1-3-3-2-	-3-														3.71	
56-44.6114-104.7647-2-99-						0-W04816-08/28/77-16-			21-							9-1-7-5-6-	-1-	-2-4-2-2-	-3-														2.19	
56-44.5883-104.7703-2-15-						0-W04817-08/28/77-17-			21-							11-1-7-5-6-	-1-	-1-2-3-2-2-	-3-														2.94	
56-44.7589-104.7389-2-15-						0-W04818-08/27/77-11-			12-							11-1-1-5-6-	-1-	-2-2-3-3-2-	-3-														3.66	
56-44.7775-104.7331-2-15-						0-W04819-08/27/77-13-			14-							11-1-4-5-7-	-1-	-1-2-3-2-2-	-3-														5.82	
56-44.8808-104.6900-2-15-						0-W04822-08/27/77-19-			14-							11-1-7-4-7-	-1-	-1-4-3-1-2-	-3-														3.55	
56-44.8525-104.6967-2-15-						0-W04824-08/27/77-17-			15-							11-1-7-5-7-	-1-	-2-4-3-2-2-	-3-														4.27	
56-44.8525-104.6900-2-15-						0-W04825-08/27/77-18-			15-							13-1-7-5-7-	-1-	-3-3-2-2-	-3-														4.96	
56-44.8247-104.6689-2-15-						0-W04826-08/27/77-18-			14-							6-1-2-4-6-	-1-	-2-1-3-3-2-	-3-														3.58	
56-44.9153-104.7081-2-15-						0-W04827-08/29/77-9-			20-							13-1-7-6-6-	-1-	-1-4-4-1-2-	-3-														7.46	
56-44.9267-104.6555-2-15-						0-W04829-08/29/77-10-			20-							13-1-7-5-7-	-1-	-1-4-3-2-2-	-2-														5.31	
56-44.9111-104.6325-2-15-		</																																

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

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DOE SAMPLE NUMBER						LAS. SAMPLE LOCATION NUMBER	ELEMENTAL CONCENTRATIONS DETERMINED BY X-RAY FLUORESCENCE										ELEMENTAL CONCENTRATIONS DETERMINED BY ARC-SOURCE EMISSION SPECTROGRAPHY	
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE		Concentrations reported in weight parts per million (ppm)										Concentrations in weight ppm	
							Ag	Bi	Cd	Cu	Nb	Ni	Pb	Sn	W	Be	Li	
56-44.6908-104.9306-2-15-						0-404744											2	20
56-44.6400-104.9275-2-15-						0-404748	-5	-5	-5	12	-20	16	6	-10	-15		2	27
56-44.6247-104.9300-2-15-						0-404749	-5	-5	-5	23	-20	-15	11	-10	-15		1	27
56-44.6300-104.9711-2-99-						0-404770	-5	-5	-5	25	-20	17	6	-10	-15		2	27
56-44.6311-104.9833-2-11-						0-404771	-5	-5	-5	19	-20	-15	-5	-10	-15		2	20
56-44.5778-104.9661-2-15-						0-404772	-5	-5	-5	21	-20	-15	-5	-10	-15		1	21
56-44.5764-104.9947-2-15-						0-404774	-5	-5	-5	31	-20	-15	13	-10	-15		2	37
56-44.5650-104.9628-2-15-						0-404775	-5	-5	-5	19	-20	-15	-5	-10	-15		2	19
56-44.5025-104.9408-2-15-						0-404777	-5	-5	-5	17	-20	15	12	-10	-15		2	34
56-44.5106-104.9236-2-15-						0-404778	-5	-5	-5	27	-20	22	10	-10	-15		2	36
56-44.5839-104.9306-2-15-						0-404779	-5	-5	-5	26	-20	-15	11	-10	-15		2	38
56-44.5806-104.9097-2-15-						0-404780	-5	-5	-5	29	-20	-15	9	-10	-15		2	30
56-44.5531-104.8983-2-15-						0-404781	-5	-5	-5	19	-20	-15	11	-10	-15		2	31
56-44.6539-104.7764-2-15-						0-404783	-5	-5	-5	15	-20	-15	8	-10	-15		2	20
56-44.6486-104.7575-2-15-						0-404784	-5	-5	-5	20	-20	-15	-5	-10	-15	-1	18	
56-44.5808-104.8931-2-15-						0-404785	-5	-5	-5	26	-20	15	8	-10	-15		2	25
56-44.5964-104.8989-2-15-						0-404786	-5	-5	-5	23	-20	-15	12	-10	-15		2	42
56-44.6236-104.8905-2-15-						0-404787	-5	-5	-5	28	-20	15	8	-10	-15		3	47
56-44.5058-104.8961-2-15-						0-404791	-5	-5	-5	27	-20	-15	8	-10	-15		2	41
56-44.5142-104.8886-2-15-						0-404792	-5	-5	-5	22	-20	-15	9	-10	-15		2	49
56-44.5217-104.8567-2-15-						0-404793	-5	-5	-5	29	-20	28	15	-10	-15		3	42
56-44.5156-104.8339-2-15-						0-404794	-5	-5	-5	14	-20	-15	10	-10	-15		2	37
56-44.5039-104.8383-2-15-						0-404796	-5	-5	-5	20	-20	15	-5	-10	-15		2	35
56-44.5814-104.8203-2-15-						0-404799	-5	-5	-5	21	-20	-15	6	-10	-15		2	26
56-44.5950-104.8219-2-15-						0-404800	-5	-5	-5	21	-20	-15	5	-10	-15		1	41
56-44.6089-104.8181-2-99-						0-404801	-5	-5	-5	22	-20	-15	9	-10	-15		1	19
56-44.5889-104.8611-2-11-						0-404802	-5	-5	-5	28	-20	26	5	-10	-15		2	42
56-44.6361-104.8656-2-15-						0-404803	-5	-5	-5	28	-20	37	10	-10	-15		2	46
56-44.6483-104.8583-2-15-						0-404804	-5	-5	-5	28	-20	24	19	-10	-15		2	38
56-44.6433-104.8989-2-15-						0-404805	-5	-5	-5	26	-20	-15	16	-10	-15		2	48
56-44.6725-104.8389-2-15-						0-404806	-5	-5	-5	32	-20	34	16	-10	-15		2	45
56-44.6792-104.8383-2-15-						0-404807	-5	-5	-5	53	-20	33	19	-10	-15		3	42
56-44.6914-104.8550-2-15-						0-404808	-5	-5	-5	40	-20	35	13	-10	-15		2	34
56-44.5733-104.8064-2-15-						0-404809	-5	-5	-5	22	-20	-15	8	-10	-15		2	19
56-44.5614-104.7975-2-12-						0-404810	-5	-5	-5	21	-20	-15	6	-10	-15		2	25
56-44.6153-104.7981-2-99-						0-404812	-5	-5	-5	16	-20	17	-5	-10	-15		2	20
56-44.5094-104.7581-2-15-						0-404814											2	26
56-44.5967-104.7644-2-15-						0-404815	-5	-5	-5	21	-20	-15	5	-10	-15		2	35
56-44.6114-104.7647-2-99-						0-404816	-5	-5	-5	22	-20	-15	11	-10	-15		2	21
56-44.5883-104.7703-2-15-						0-404817	-5	-5	-5	29	-20	20	13	-10	-15		2	37
56-44.7589-104.7389-2-15-						0-404818											1	14
56-44.7775-104.7331-2-15-						0-404819	-5	-5	-5	20	-20	-15	-5	-10	-15		1	18
56-44.8808-104.6900-2-15-						0-404822	-5	-5	-5	25	-20	16	12	-10	-15		2	33
56-44.8525-104.6967-2-15-						0-404824											4	38
56-44.8525-104.6800-2-15-						0-404825	-5	-5	-5	37	-20	26	16	-10	-15		2	50
56-44.8247-104.6689-2-15-						0-404826	-5	-5	-5	10	-20	-15	-5	-10	-15		2	17
56-44.9153-104.7081-2-15-						0-404827	-5	-5	-5	17	-20	19	15	-10	-15		2	38
56-44.9267-104.6556-2-15-						0-404828	-5	-5	-5	35	-20	-15	14	-10	-15		2	36
56-44.9111-104.6325-2-15-						0-404830	-5	-5	-5	54	-20	31	-5	-10	-15		3	30
56-44.8950-104.6411-2-15-						0-404831	-5	-5	-5	35	-20	32	12	-10	-15		2	42
56-44.8803-104.6519-2-15-						0-404832	-5	-5	-5	41	-20	33	10	-10	-15		3	35

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	LAST 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
56-44.6908-104.9306-2-15-	0-W04764	43880	-0.12	602	17690	43	-95	12.3	37	-2.0	4	0.7	9207	6.5	15430	31	0.3					
56-44.6400-104.9275-2-15-	0-W04768	50370	-0.06	575	14360	50	-73	11.1	49	1.7	4	0.8	11540	7.0	14650	28	0.3					
56-44.6247-104.9300-2-15-	0-W04769	60490	-0.09	535	6575	59	-65	6.9	52	3.4	3	1.0	16300	5.2	17700	37	0.3					
56-44.6300-104.9711-2-99-	0-W04770	52210	-0.07	576	7944	53	-55	6.8	35	2.5	4	1.0	12690	6.7	17200	32	0.4					
56-44.6311-104.9833-2-11-	0-W04771	39340	-0.08	492	38270	46	-57	8.4	36	-1.4	3	0.8	13140	9.0	13980	35	0.4					
56-44.5778-104.9661-2-15-	0-W04773	39110	-0.05	560	17270	34	-68	10.7	25	1.7	3	0.6	6652	3.5	14900	22	0.2					
56-44.5764-104.9947-2-15-	0-W04774	70780	-0.09	504	13360	67	-63	8.9	62	4.2	3	0.9	20610	4.0	19630	41	0.3					
56-44.5650-104.9628-2-15-	0-W04775	45270	-0.07	509	9040	58	-53	6.2	43	2.3	4	0.9	10810	8.0	15990	26	0.3					
56-44.5025-104.9408-2-15-	0-W04777	59770	-0.10	733	6333	40	-69	12.9	53	3.3	4	1.0	18490	6.0	17490	32	0.3					
56-44.5106-104.9235-2-15-	0-W04778	56490	-0.07	476	7082	52	-60	12.7	42	3.1	4	0.8	12720	5.3	14370	31	0.3					
56-44.5839-104.9306-2-15-	0-W04779	64310	-0.09	562	7246	57	-62	6.8	56	4.0	3	1.0	17550	5.9	18490	37	0.4					
56-44.5806-104.9097-2-15-	0-W04780	58680	-0.09	494	5512	54	-50	6.5	41	3.4	3	0.8	16190	4.6	13810	35	0.3					
56-44.5531-104.8983-2-15-	0-W04781	57380	-0.11	383	3129	69	-65	14.9	47	3.6	5	1.1	19090	6.9	13130	43	0.4					
56-44.5539-104.7764-2-15-	0-W04783	38410	-0.06	343	2725	40	-42	11.0	30	1.6	3	0.7	10350	7.9	7762	24	0.3					
56-44.6486-104.7575-2-15-	0-W04784	34140	-0.07	434	4417	60	-38	6.2	37	1.8	4	0.8	13010	18.3	7158	39	0.5					
56-44.5808-104.8931-2-15-	0-W04785	38960	-0.07	489	4747	63	-61	9.4	27	2.3	4	1.1	19010	6.9	12770	31	0.4					
56-44.5964-104.8989-2-15-	0-W04786	69300	-0.12	330	5594	59	-62	14.9	66	5.0	5	1.2	21610	5.6	18120	40	0.5					
56-44.6236-104.8906-2-15-	0-W04787	64250	-0.07	561	7123	63	-85	17.6	44	3.6	5	1.0	24390	5.6	13990	31	0.4					
56-44.5058-104.8961-2-15-	0-W04791	57900	-0.08	439	4148	61	-60	7.2	52	4.0	5	1.1	18670	7.4	16860	36	0.4					
56-44.5142-104.8886-2-15-	0-W04792	51910	-0.09	530	17250	55	105	9.6	44	4.3	4	0.8	15760	4.4	14910	29	0.2					
56-44.5217-104.8567-2-15-	0-W04793	68000	-0.11	564	4480	71	-57	18.3	57	4.8	6	1.1	33510	6.2	14220	48	0.6					
56-44.5156-104.8339-2-15-	0-W04794	47650	-0.10	314	2596	57	-61	12.3	34	2.5	5	0.8	12590	7.2	12500	28	0.4					
56-44.5039-104.8383-2-15-	0-W04796	50370	-0.08	379	4133	63	-58	7.0	51	3.1	4	0.9	17760	8.4	14590	34	0.4					
56-44.5814-104.8203-2-15-	0-W04799	38620	-0.08	332	3008	61	-58	8.7	31	2.2	4	0.8	11560	9.7	9836	30	0.5					
56-44.5950-104.8219-2-15-	0-W04800	42450	-0.11	327	6900	52	-45	13.2	45	2.7	4	0.8	10980	7.5	8444	35	0.3					
56-44.6089-104.8181-2-99-	0-W04801	54220	-0.07	264	3967	72	-58	13.9	44	2.6	6	1.0	13260	7.2	13090	33	0.5					
56-44.5889-104.8611-2-11-	0-W04802	59470	-0.09	400	7366	75	-84	12.9	53	4.6	4	1.2	30180	7.1	13620	44	0.6					
56-44.6361-104.8656-2-15-	0-W04803	55280	-0.09	875	3462	75	-65	13.2	47	3.0	5	1.1	25450	9.5	12800	40	0.5					
56-44.6483-104.8583-2-15-	0-W04804	60920	-0.10	610	5325	76	-58	16.2	49	4.2	5	1.0	27790	5.0	13450	51	0.5					
56-44.6433-104.8989-2-15-	0-W04805	64710	-0.08	723	8979	53	-69	13.8	54	4.0	4	0.8	12820	4.1	17000	34	0.4					
56-44.6725-104.8389-2-15-	0-W04806	75640	-0.09	272	3120	84	-50	12.7	66	4.9	5	1.2	24630	7.2	14610	46	0.5					
56-44.6792-104.8383-2-15-	0-W04807	59090	-0.09	557	3673	86	-65	15.5	75	3.8	5	1.1	34480	6.1	13560	38	0.4					
56-44.6914-104.8550-2-15-	0-W04808	50660	-0.11	1411	2457	63	-70	22.2	49	3.4	5	1.3	47470	8.4	11110	45	0.5					
56-44.5733-104.8064-2-15-	0-W04809	36570	-0.05	363	27850	34	-53	9.8	26	1.7	3	0.6	8469	4.9	12000	18	0.2					
56-44.5614-104.7975-2-12-	0-W04810	48170	-0.07	349	9756	65	-63	7.6	37	3.0	3	1.1	16970	8.5	13070	30	0.4					
56-44.6153-104.7981-2-99-	0-W04812	39150	-0.08	643	4388	66	-56	6.9	43	2.0	4	1.0	14510	11.6	15250	35	0.4					
56-44.5094-104.7581-2-15-	0-W04814	57140	-0.10	453	37510	-98																
56-44.5967-104.7644-2-15-	0-W04815	44400	-0.09	481	37870	48	-61	11.8	43	2.5	4	0.9	11290	5.9	15620	25	0.3					
56-44.6114-104.7647-2-99-	0-W04816	37520	-0.11	407	11770	48	-51	5.5	37	-1.6	3	0.9	9918	5.7	13430	-20	0.3					
56-44.5883-104.7703-2-15-	0-W04817	55610	-0.15	423	12730	63	-44	8.7	47	4.9	5	1.4	20910	6.5	16660	34	0.4					
56-44.7589-104.7389-2-15-	0-W04819	24870	-0.21	346	-704	43	-49	8.9	-25	-3.2	4	-0.6	11160	12.0	-3059	-32	-0.3					
56-44.7775-104.7331-2-15-	0-W04819	28260	-0.10	228	-593	46	-39	5.6	33	-1.4	3	0.7	8050	12.4	8174	29	0.3					
56-44.8808-104.6900-2-15-	0-W04822	42400	-0.14	489	3170	71	-86	17.9	57	3.8	5	1.7	55300	10.3	10980	40	0.5					
56-44.8525-104.6967-2-15-	0-W04824	60890	-0.24	686	4751	69	-91	23.5	57	4.8	5	1.6	64250	7.8	13880	-31	0.4					
56-44.8525-104.6800-2-15-	0-W04825	51080	-0.09	304	3840	59	-81	18.2	39	3.1	5	0.9	27750	6.7	10340	32	0.4					
56-44.8247-104.6689-2-15-	0-W04826	25810	-0.13	416	-910	47	-55	9.0	42	-1.8	3	1.0	22180	10.1	5531	36	-0.2					
56-44.9153-104.7081-2-15-	0-W04827	80700	-0.23	322	17740	76	-60	7.2	82	4.0	7	1.3	25730	5.2	15000	-34	0.4					
56-44.9267-104.6556-2-15-	0-W04828	72550	-0.24	415	3211	55	-55	15.3	56	7.1	5	1.9	52610	4.6	16410	52	0.5					
56-44.9111-104.6325-2-15-	0-W04830	50890	-0.10	770	-2238	69	-157	26.4	54	2.9	5	1.3	50410	5.8	11120	38	0.5					
56-44.8950-104.6411-2-15-	0-W04831	43400	-0.13	422	-1501	73	-99	18.1	50	3.5	4	1.4	49050	15.5	9266	46	0.6					
56-44.8803-104.6519-2-15-	0-W04832	37640	-0.16	-226	-1499	72	-102	28.7	37	2.6	4	1.6	53530	8.3	7374	29	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	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
56-44.6908-104.9306-2-15-	0-W04764	14450	285	14080	-36	-4	4.2	3.5	-316	-1	-1	5.4	2839	37	-2.3	-60	0.452			
56-44.6400-104.9275-2-15-	0-W04769	17300	425	7021	34	-2	5.0	3.5	-294	-1	-1	7.2	2794	54	2.8	56	0.700			
56-44.6247-104.9300-2-15-	0-W04760	12230	283	5593	54	-3	7.7	3.6	-249	-1	-1	9.3	2673	64	2.4	66	0.771			
56-44.6300-104.9711-2-99-	0-W04770	12410	235	5840	-19	-2	5.9	4.0	-204	-1	-1	7.6	3230	63	2.3	-42	0.426			
56-44.6311-104.9833-2-11-	0-W04771	23300	309	5498	45	-2	5.0	4.1	-227	-1	-1	6.8	2436	52	3.1	60	0.518			
56-44.5778-104.9661-2-15-	0-W04773	12160	274	6513	27	-2	3.0	2.3	-255	-1	-1	4.9	2426	32	-1.0	-15	0.508			
56-44.5764-104.9947-2-15-	0-W04774	15440	505	3351	42	-3	9.7	4.4	-290	-1	-1	10.6	2440	91	3.4	157	0.484			
56-44.5650-104.9628-2-15-	0-W04775	11090	301	4915	34	-2	4.7	4.5	-226	-1	-1	8.5	2718	49	4.2	-28	0.388			
56-44.5025-104.9408-2-15-	0-W04777	11830	248	9951	-30	-3	8.4	3.1	-231	-1	-1	7.6	3375	89	3.2	94	0.371			
56-44.5106-104.9235-2-15-	0-W04778	12190	340	4072	34	-2	6.5	3.7	-272	-1	-1	7.1	3135	103	2.9	-48	0.431			
56-44.5839-104.9306-2-15-	0-W04779	14500	303	4568	56	-3	8.5	4.4	-244	-1	-1	10.0	3097	103	3.1	-78	0.402			
56-44.5806-104.9097-2-15-	0-W04780	10090	232	3519	-25	-3	6.4	3.6	-231	-1	-1	11.1	2702	72	-1.9	63	0.532			
56-44.5531-104.8983-2-15-	0-W04791	9545	921	3797	-31	-3	8.1	5.1	-344	-1	-1	9.7	3065	73	3.3	105	0.326			
56-44.5539-104.7764-2-15-	0-W04793	5020	489	1267	22	-2	5.2	3.3	-267	-1	-1	7.2	2770	52	2.1	65	0.426			
56-44.6486-104.7575-2-15-	0-W04794	5007	267	1673	32	-2	5.6	4.9	-188	-1	-1	9.5	3368	48	4.3	-50	0.460			
56-44.5308-104.8931-2-15-	0-W04795	4150	713	6758	-20	-2	4.5	5.4	-304	-1	-1	7.8	2596	57	3.3	-39	0.336			
56-44.5964-104.8989-2-15-	0-W04796	13710	588	3650	69	-4	10.2	4.9	-311	-2	-1	10.8	3475	98	3.2	-41	0.274			
56-44.6236-104.8906-2-15-	0-W04797	12410	1179	3248	52	-2	7.6	5.6	-462	-1	1	8.4	3762	89	3.3	133	0.419			
56-44.5058-104.8961-2-15-	0-W04798	7682	300	4286	47	-2	8.1	4.9	-244	-1	-1	10.4	3224	84	4.8	87	0.383			
56-44.5142-104.8886-2-15-	0-W04799	11690	546	8540	47	-3	6.6	4.4	-345	-1	-1	9.6	3154	98	3.0	-64	0.686			
56-44.5217-104.8567-2-15-	0-W04799	8290	871	2947	63	-3	11.7	5.4	-328	-1	-1	10.9	3923	104	4.3	-106	0.440			
56-44.5156-104.8339-2-15-	0-W04794	7901	523	3296	41	-2	6.4	4.2	-314	-1	-1	8.0	4060	64	3.9	68	0.440			
56-44.5039-104.8383-2-15-	0-W04796	7706	615	2977	59	-2	7.3	5.1	-286	-1	-1	9.3	2861	79	3.7	86	0.411			
56-44.5814-104.8203-2-15-	0-W04799	7753	893	2532	-20	-2	5.4	5.2	-346	-1	-1	6.9	3436	58	3.4	38	0.470			
56-44.5950-104.8219-2-15-	0-W04800	5636	355	1933	-29	-3	6.9	3.4	-252	-1	-1	8.3	3676	53	3.7	-43	0.364			
56-44.6089-104.8181-2-99-	0-W04801	6314	436	2774	33	-2	7.0	5.2	-301	-1	-1	8.9	4705	80	3.1	46	0.484			
56-44.5889-104.8611-2-11-	0-W04802	13160	1325	3507	50	-3	9.1	6.0	-423	-1	-1	10.7	2772	81	4.3	114	0.263			
56-44.6361-104.8656-2-15-	0-W04803	10060	1149	2617	42	-3	8.0	6.2	-396	-1	-1	10.6	3826	82	4.0	96	0.444			
56-44.6483-104.8583-2-15-	0-W04804	9525	847	3130	39	-3	9.6	7.0	-328	-1	-1	10.4	3512	81	5.6	97	0.425			
56-44.6433-104.8989-2-15-	0-W04805	13700	94	5839	45	-2	7.6	3.3	-243	-1	-1	8.0	3042	110	2.3	-51	1.021			
56-44.6725-104.8389-2-15-	0-W04806	8710	484	1926	58	-3	12.4	6.7	-267	-1	-1	13.6	3786	114	3.9	119	0.449			
56-44.6792-104.8383-2-15-	0-W04807	11020	1274	2153	51	-3	10.2	6.2	-403	-1	1	12.4	3223	105	4.4	111	0.417			
56-44.6914-104.8550-2-15-	0-W04808	7370	1556	1504	-35	-3	10.9	7.1	-422	-1	-1	10.7	3636	93	2.7	141	0.445			
56-44.5733-104.8064-2-15-	0-W04809	8003	348	3029	-14	-2	4.2	2.8	-249	-1	-1	5.1	1867	39	2.1	-24	0.371			
56-44.5614-104.7975-2-12-	0-W04810	8495	812	3159	41	-2	7.1	5.2	-335	-1	-1	7.9	2924	58	4.7	-36	0.381			
56-44.6153-104.7981-2-99-	0-W04812	6733	250	4757	-20	-2	4.8	4.6	-226	-1	-1	8.1	3996	67	3.7	-30	0.477			
56-44.5094-104.7581-2-15-	0-W04814	20250	493	3957					-482				3663	77						
56-44.5967-104.7644-2-15-	0-W04815	14530	384	3225	-20	-3	5.1	3.3	-274	-1	-1	7.2	3680	59	2.6	-51	0.515			
56-44.6114-104.7647-2-99-	0-W04816	8387	410	2732	-37	-3	5.7	3.6	-231	-2	-1	7.3	2443	46	3.8	-60	0.300			
56-44.5883-104.7703-2-15-	0-W04817	11350	369	2780	-59	-3	8.3	5.6	-202	-2	-1	11.7	4049	85	-3.3	-81	0.251			
56-44.7589-104.7389-2-15-	0-W04818	-2659	676	1215	-75	-4	4.1	-2.0	-321	-3	-2	5.8	2852	40	-4.4	-102	0.631			
56-44.7775-104.7331-2-15-	0-W04819	3382	363	1914	-32	-3	4.4	3.7	-194	-1	-1	7.0	2842	43	3.3	-28	0.831			
56-44.8808-104.6900-2-15-	0-W04822	11490	1911	2415	-58	-3	7.6	7.5	-429	-2	-1	9.3	3163	71	-3.5	205	0.382			
56-44.8525-104.6967-2-15-	0-W04824	11140	1881	2670	-89	-6	11.3	4.5	-553	-5	-2	11.1	4381	104	-5.1	173	0.385			
56-44.8525-104.6800-2-15-	0-W04825	9318	1509	1023	-22	-3	7.5	4.3	-479	-1	-1	8.1	2938	85	-2.6	90	0.612			
56-44.8247-104.6689-2-15-	0-W04826	-2832	888	1384	-43	-4	4.5	4.4	-331	-2	-1	6.3	2390	44	-2.5	-64	0.568			
56-44.9153-104.7081-2-15-	0-W04827	16750	265	3893	-91	-5	9.5	7.5	241	-4	-2	23.1	2390	76	6.7	-128	0.323			
56-44.9267-104.6556-2-15-	0-W04828	13740	463	2743	-88	-6	11.6	6.6	-294	-3	-2	12.9	3385	108	-5.0	188	0.412			
56-44.9111-104.5325-2-15-	0-W04830	8635	3098	1823	46	-3	8.9	6.3	-759	-1	-1	10.0	3295	78	3.2	124	0.511			
56-44.8950-104.6411-2-15-	0-W04831	-4687	2115	1879	-41	-4	9.1	6.9	-502	-2	-1	11.3	2945	72	5.7	112	0.488			
56-44.8803-104.6519-2-15-	0-W04832	4783	2381	1536	-67	-4	7.9	7.5	-569	-3	-1	8.4	2772	75	6.0	-99	0.694			

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

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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)	SCINTILLATOR (uL/RPN)	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																											
56-44.9356-104.6244-2-15-						0-404933-09/29/77-13-	29-				-C-				13-1-7-5-7-	-1-	-1-4-5-2-2-	-3-															4.97		
56-44.9531-104.6106-2-15-						0-404934-09/29/77-14-	29-				-C-				11-1-7-5-7-	-1-	-1-3-3-1-2-	-3-																3.97	
56-44.9789-104.5589-2-15-						0-404936-09/29/77-16-	27-				-C-				16-1-7-1-	-1-	-4-3-																	5.07	
56-44.9683-104.5697-2-99-						0-404937-09/29/77-17-	27-				-C-				13-1-7-5-6-	-1-	-4-3-1-2-	-3-																7.28	
56-44.8769-104.5911-2-15-						0-404939-09/29/77-18-	25-				-C-				11-1-1-4-8-	-1-	-2-2-3-3-2-	-3-																4.97	
56-44.8361-104.6053-2-99-						0-404940-09/29/77-10-	24-				-C-				16-1-2-5-6-	-1-	-4-3-1-2-	-3-																5.35	
56-44.9592-104.5186-2-15-						0-404941-08/30/77-12-	23-				-C-				16-1-7-4-8-	-1-	-2-4-3-2-2-	-3-																4.11	
56-44.9267-104.5447-2-15-						0-404942-09/30/77-15-	23-				-C-				16-1-7-5-7-	-1-	-2-4-3-2-2-	-3-																4.21	
56-44.9033-104.5606-2-15-						0-404943-09/30/77-13-	23-				-C-				13-1-2-5-9-	-1-	-2-2-3-3-2-	-3-																3.94	
56-44.8933-104.5611-2-15-						0-404944-09/30/77-14-	23-				-C-				18-1-2-5-6-	-1-	-2-2-3-3-3-	-3-																3.73	
56-44.8522-104.5081-2-15-						0-404945-09/30/77-15-	23-				-C-				11-1-7-5-7-	-1-	-1-2-3-3-2-	-3-																4.01	
56-44.8661-104.5414-2-99-						0-404946-09/30/77-16-	22-				-C-				13-1-2-5-6-	-1-	-4-3-2-2-	-3-																4.58	
56-44.8747-104.5753-2-11-						0-404947-09/31/77-16-	21-12, 2-		6.9-	550-					11-1-1-5-6-1-2-1-	-2-4-3-2-	-3-																	4.77	
56-44.8217-104.5814-2-15-						0-404949-09/31/77-17-	21-				-C-				12-1-1-5-8-	-1-	-1-2-3-2-1-	-3-																5.11	
56-44.8225-104.5931-2-15-						0-404949-09/31/77-17-	19-				-C-				10-1-1-5-6-	-1-	-2-2-4-2-2-	-3-																3.52	
56-44.8225-104.5403-2-15-						0-404950-09/31/77-18-	20-				-C-				11-1-1-5-6-	-1-	-2-2-3-3-2-	-3-																1.43	
56-44.8250-104.5267-2-11-						0-404951-09/31/77-19-	20-15, 0-		6.8-	1100-					11-1-1-6-8-1-2-1-	-1-3-3-2-	-3-																	3.07	
56-44.8114-104.5800-2-15-						0-404952-09/31/77-20-	16-				-C-				9-1-1-4-6-	-1-	-2-2-3-2-2-	-3-																3.77	
56-44.7642-104.6064-2-12-						0-404953-09/01/77-13-	21-14, 0-		7.1-	800-					11-1-7-6-8-2-2-2-1-2-4-2-2-	-3-																		4.42	
56-44.7750-104.5486-2-15-						0-404954-09/01/77-14-	22-				-C-				13-1-7-5-6-	-1-	-2-2-4-2-2-	-3-																2.81	
56-44.7728-104.5111-2-15-						0-404955-09/01/77-14-	22-				-C-				11-1-6-5-6-	-1-	-1-4-3-2-2-	-3-																2.61	
56-44.7559-104.6306-2-15-						0-404956-09/01/77-15-	23-				-C-				13-1-7-5-7-	-1-	-2-4-3-3-2-	-3-																2.19	
56-44.7664-104.6553-2-15-						0-404957-09/01/77-15-	23-				-C-				13-1-1-5-6-	-1-	-1-4-4-3-2-	-3-																4.68	
56-44.7631-104.6550-2-15-						0-404959-09/01/77-15-	23-				-C-				11-1-1-5-6-	-1-	-1-2-3-3-2-	-3-																3.06	
56-44.7914-104.6183-2-11-						0-404959-09/01/77-16-	20-22, 0-		6.9-	450-					11-1-1-6-6-1-2-2-	-4-3-2-2-	-3-																	1.92	
56-44.7894-104.5994-2-11-						0-404960-09/01/77-16-	22-17, 0-		6.7-	550-					11-1-1-5-8-2-3-2-	-2-3-2-2-	-3-																	2.31	
56-44.9850-104.6569-2-15-						0-404961-09/01/77-18-	22-				-C-				-1-7-4-8-	-1-	-1-3-2-2-1-	-3-																7.51	
56-44.9947-104.6214-2-15-						0-404962-09/01/77-19-	24-				-C-				13-1-	-5-7-	-1-	-2-1-2-2-1-	-3-															7.74	
56-44.9697-104.6775-2-15-						0-404964-09/02/77-12-	19-				-C-				18-1-7-5-6-	-1-	-2-4-3-2-2-	-3-																5.14	
56-44.9539-104.6964-2-15-						0-404965-09/02/77-12-	19-				-C-				-1-7-5-7-	-1-	-2-3-2-2-1-	-3-																7.96	
56-44.9544-104.7281-2-15-						0-404966-09/02/77-12-	19-				-C-				16-1-7-5-6-	-1-	-1-4-3-1-1-	-3-																6.74	
56-44.9744-104.7844-2-15-						0-404967-09/02/77-14-	20-				-C-				18-1-7-5-7-	-1-	-2-2-4-2-2-	-3-																4.13	
56-44.9550-104.7722-2-15-						0-404969-09/02/77-13-	20-				-C-				23-1-7-5-7-	-1-	-1-4-3-2-2-	-3-																5.32	
56-44.9778-104.7828-2-15-						0-404969-09/02/77-14-	21-				-C-				11-1-7-5-7-	-1-	-2-4-4-2-2-	-3-																4.02	
56-44.9756-104.7714-2-15-						0-404970-09/02/77-14-	20-				-C-				16-1-7-5-7-	-1-	-2-2-3-2-2-	-3-																4.76	
56-44.9489-104.8486-2-15-						0-404971-09/02/77-16-	22-				-C-				13-1-7-5-7-	-1-	-2-4-3-2-2-	-3-																3.41	
56-44.9064-104.7631-2-15-						0-404974-09/03/77-12-	25-				-C-				19-1-7-5-6-	-1-	-1-4-3-1-1-	-3-																6.35	
56-44.9164-104.7522-2-15-						0-404975-09/03/77-12-	25-				-C-				13-1-7-5-6-	-1-	-1-4-4-2-2-	-3-																4.14	
56-44.8694-104.7978-2-15-						0-404976-09/03/77-13-	26-				-C-				13-1-7-5-7-	-1-	-1-4-3-1-1-	-3-																4.87	
56-44.8489-104.7641-2-15-						0-404977-09/03/77-14-	26-				-C-				9-1-7-5-7-	-1-	-1-4-3-2-2-	-3-																4.24	
56-44.8375-104.7861-2-15-						0-404979-09/03/77-16-	26-				-C-				9-1-1-5-6-	-1-	-1-4-3-1-2-	-3-																4.48	
56-44.8547-104.8539-2-15-						0-404980-09/03/77-16-	34-				-C-				16-1-7-5-7-	-1-	-1-3-3-2-2-	-3-																4.10	
56-44.8542-104.8703-2-15-						0-404981-09/03/77-16-	32-				-C-				11-1-7-5-7-	-1-	-2-4-3-2-2-	-3-																6.06	
56-44.8183-104.8303-2-15-						0-404982-09/03/77-17-	29-				-C-				13-1-7-5-6-	-1-	-1-4-2-2-2-	-3-																2.63	
56-44.8136-104.7983-2-15-						0-404984-09/03/77-18-	29-				-C-				11-1-7-4-7-	-1-	-2-3-3-2-2-	-3-																3.51	
56-44.7989-104.8006-2-15-						0-404985-09/03/77-19-	29-				-C-				9-1-7-4-6-	-1-	-2-3-3-3-2-	-3-																1.99	
56-44.8031-104.7983-2-15-						0-404986-09/03/77-19-	29-				-C-				9-1-7-6-8-	-1-	-2-3-3-3-2-																		

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	LAS. 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	
56-44.9356-104.6244-2-15-	0-404933	-5	-5	-5	33	-20	-15	15	-10	-15	2	33						
56-44.9531-104.6106-2-15-	0-404934	-5	-5	-5	16	-20	22	16	-10	-15	2	39						
56-44.9789-104.5589-2-15-	0-404936	-5	-5	-5	33	-20	20	11	-10	-15	2	49						
56-44.9683-104.5697-2-99-	0-404937	-5	-5	-5	40	-20	17	11	-10	-15	3	48						
56-44.8769-104.5911-2-15-	0-404939	-5	-5	-5							3	27						
56-44.8361-104.6053-2-99-	0-404940	-5	-5	-5	11	-20	-15	9	-10	-15	-1	28						
56-44.9592-104.5186-2-15-	0-404941	-5	-5	-5	28	-20	18	10	-10	-15	2	41						
56-44.9267-104.5447-2-15-	0-404942	-5	-5	-5	32	-20	-15	11	-10	-15	2	26						
56-44.9033-104.5606-2-15-	0-404943	-5	-5	-5	27	-20	17	7	-10	-15	1	21						
56-44.8933-104.5611-2-15-	0-404944	-5	-5	-5	26	-20	-15	-5	-10	-15	1	22						
56-44.8522-104.5081-2-15-	0-404945	-5	-5	-5	10	-20	-15	-5	-10	-15	1	18						
56-44.8661-104.5414-2-99-	0-404946	-5	-5	-5	14	-20	-15	7	-10	-15	-1	27						
56-44.8747-104.5753-2-11-	0-404947	-5	-5	-5	14	-20	-15	-5	-10	-15	-1	15						
56-44.8217-104.5814-2-15-	0-404948	-5	-5	-5	30	-20	27	11	-10	-15	-1	32						
56-44.8225-104.5531-2-15-	0-404949	-5	-5	-5	13	-20	-15	6	-10	-15	1	15						
56-44.8225-104.5403-2-15-	0-404950	-5	-5	-5	16	-20	-15	-5	-10	-15	-1	23						
56-44.8250-104.5267-2-11-	0-404951	-5	-5	-5	13	-20	-15	5	-10	-15	1	13						
56-44.8114-104.5809-2-15-	0-404952	-5	-5	-5	18	-20	-15	7	-10	-15	-1	18						
56-44.7642-104.6064-2-12-	0-404953	-5	-5	-5	21	-20	17	7	-10	-15	1	25						
56-44.7750-104.5486-2-15-	0-404954	-5	-5	-5	23	-20	-15	-5	-10	-15	-1	22						
56-44.7728-104.5111-2-15-	0-404955	-5	-5	-5	22	-20	-15	8	-10	-15	1	22						
56-44.7569-104.6306-2-15-	0-404956	-5	-5	-5	24	-20	-15	-5	-10	-15	1	22						
56-44.7664-104.6553-2-15-	0-404957	-5	-5	-5	16	-20	-15	-5	-10	-15	-1	24						
56-44.7631-104.6550-2-15-	0-404958	-5	-5	-5	17	-20	-15	5	-10	-15	-1	17						
56-44.7914-104.6183-2-11-	0-404959	-5	-5	-5	16	-20	-15	6	-10	-15	-1	10						
56-44.7894-104.5994-2-11-	0-404960	-5	-5	-5	17	-20	-15	-5	-10	-15	-1	6						
56-44.9850-104.6569-2-15-	0-404961	-5	-5	-5	39	-20	38	18	-10	-15	2	34						
56-44.9947-104.6214-2-15-	0-404962	-5	-5	-5	32	-20	36	13	-10	-15	2	26						
56-44.9697-104.6775-2-15-	0-404964	-5	-5	-5	39	-20	26	8	-10	-15	3	38						
56-44.9539-104.6964-2-15-	0-404965	-5	-5	-5	24	-20	57	-5	10	-15	2	23						
56-44.9544-104.7281-2-15-	0-404966	-5	-5	-5	28	-20	21	19	-10	-15	2	34						
56-44.9744-104.7844-2-15-	0-404967	-5	-5	-5	29	-20	26	12	-10	-15	2	44						
56-44.9550-104.7722-2-15-	0-404968	-5	-5	-5	33	-20	24	16	-10	-15	3	31						
56-44.9778-104.7828-2-15-	0-404969	-5	-5	-5	36	-20	16	12	-10	-15	2	48						
56-44.9756-104.7714-2-15-	0-404970	-5	-5	-5	42	-20	35	16	-10	-15	2	51						
56-44.9489-104.8486-2-15-	0-404971	-5	-5	-5	19	-20	-15	11	-10	-15	2	39						
56-44.9064-104.7631-2-15-	0-404974	-5	-5	-5	30	-20	-15	20	-10	-15	2	29						
56-44.9164-104.7522-2-15-	0-404975	-5	-5	-5	27	-20	-15	14	-10	-15	-1	61						
56-44.8694-104.7978-2-15-	0-404976	-5	-5	-5	26	-20	-15	11	-10	-15	2	24						
56-44.8489-104.7661-2-15-	0-404977	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	17						
56-44.8375-104.7861-2-15-	0-404979	-5	-5	-5	32	-20	-15	15	-10	-15	2	31						
56-44.8547-104.8539-2-15-	0-404980	-5	-5	-5	13	-20	18	18	-10	-15	2	24						
56-44.8542-104.8703-2-15-	0-404981	-5	-5	-5	46	-20	36	8	-10	-15	2	42						
56-44.8183-104.8303-2-15-	0-404982	-5	-5	-5	26	-20	24	14	-10	-15	2	35						
56-44.8136-104.7983-2-15-	0-404984	-5	-5	-5	37	-20	37	6	-10	-15	2	43						
56-44.7989-104.8006-2-15-	0-404985	-5	-5	-5	25	-20	-15	-5	-10	-15	2	32						
56-44.8031-104.7983-2-15-	0-404986	-5	-5	-5	21	-20	-15	8	-10	-15	2	28						
56-44.7703-104.8150-2-15-	0-404987	-5	-5	-5	29	-20	36	13	-10	-15	3	47						
56-44.7650-104.8239-2-15-	0-404988	-5	-5	-5	21	-20	27	10	-10	-15	2	42						
56-44.9125-104.7861-2-15-	0-404990	-5	-5	-5	27	-20	21	12	-10	-15	2	36						
56-44.9339-104.8294-2-15-	0-404991	-5	-5	-5	33	-20	30	9	-10	-15	2	99						

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
56-44	9356-104.6244-2-15-	0-004933	69700	-0.20	410	-704	76	-47	11.9	68	5.7	5	1.3	26270	8.0	15000	46	0.5				
56-44	9531-104.6106-2-15-	0-004934	58140	-0.09	350	3375	52	-67	14.9	41	2.6	5	0.8	15940	6.2	11890	34	0.4				
56-44	9789-104.5589-2-15-	0-004935	60110	-0.14	494	4981	63	-57	7.4	53	4.2	4	1.0	26670	5.1	16480	44	0.4				
56-44	9683-104.5697-2-99-	0-004937	51040	-0.17	517	8937	90	-85	17.0	65	3.9	4	2.0	64030	7.1	15130	39	0.5				
56-44	8767-104.5911-2-15-	0-004939	53380	-0.28	-221	-1118	43	-75	20.4	-33	-4.6	5	1.1	44680	5.9	10250	-39	-0.4				
56-44	8361-104.6053-2-99-	0-004940	34550	-0.07	267	-590	49	-44	10.2	30	1.7	4	0.8	8830	8.2	8026	25	0.3				
56-44	9592-104.6186-2-15-	0-004941	50100	-0.12	554	5952	68	-95	17.3	54	3.1	3	1.3	49050	8.5	8199	34	0.5				
56-44	9267-104.5447-2-15-	0-004942	80920	-0.18	351	4214	98	-49	10.1	93	5.7	6	1.7	35670	5.6	20540	41	0.4				
56-44	9033-104.5606-2-15-	0-004943	56550	-0.19	297	2753	67	-44	13.3	50	4.0	6	1.5	26220	10.7	9751	46	0.5				
56-44	8933-104.5611-2-15-	0-004944	40120	-0.08	248	4021	47	-37	10.6	35	2.5	4	0.6	9295	9.6	8033	30	0.4				
56-44	8522-104.5081-2-15-	0-004945	36130	-0.14	216	2346	56	88	5.8	39	-1.9	4	0.9	8161	14.8	9366	37	0.6				
56-44	8661-104.5414-2-99-	0-004946	39490	-0.16	464	2642	68	-44	7.0	53	-2.5	4	1.6	12450	14.2	12020	39	0.5				
56-44	8747-104.5753-2-11-	0-004947	25620	-0.17	205	-567	51	-33	7.0	30	-2.7	4	1.0	8001	16.2	5247	-25	0.4				
56-44	8217-104.5814-2-15-	0-004948	49760	-0.09	412	5634	67	-81	18.5	40	2.5	5	1.0	20200	11.7	10570	33	0.4				
56-44	8225-104.5531-2-15-	0-004949	34620	-0.13	271	4093	64	-59	9.6	33	-1.8	3	0.9	20790	10.6	10020	29	0.5				
56-44	8225-104.5403-2-15-	0-004950	30980	-0.12	372	16760	30	-45	3.4	29	-1.9	2	0.9	7265	8.2	19000	-18	0.2				
56-44	8250-104.5267-2-11-	0-004951	36880	-0.18	-122	3054	54	-41	12.9	30	-3.0	5	1.2	22620	15.9	9032	-24	0.5				
56-44	8114-104.5800-2-15-	0-004952	33150	-0.07	368	3969	49	-66	13.4	36	1.7	4	0.7	10370	12.2	7806	26	0.4				
56-44	7642-104.6064-2-12-	0-004953	49480	-0.13	371	29170	54	-61	7.5	33	3.0	4	0.9	13430	8.0	15010	36	0.5				
56-44	7750-104.5486-2-15-	0-004954	49420	-0.16	474	10940	58	-51	7.0	43	3.5	5	1.6	16610	8.1	17320	30	0.4				
56-44	7728-104.5111-2-15-	0-004955	44660	-0.17	513	17480	44	-50	8.0	49	4.1	4	1.7	17970	8.8	18960	24	0.3				
56-44	7569-104.6306-2-15-	0-004956	55210	-0.09	394	49510	51	-69	12.1	37	2.4	4	0.8	13310	4.6	18520	25	0.3				
56-44	7664-104.6553-2-15-	0-004957	40270	-0.14	215	4840	51	-43	6.2	34	2.3	4	1.0	8449	9.2	8794	-25	0.6				
56-44	7631-104.6550-2-15-	0-004959	35050	-0.16	320	1985	49	-38	4.9	-19	2.5	4	0.8	11170	10.6	8072	35	0.4				
56-44	7914-104.6183-2-11-	0-004959	27570	-0.13	527	8178	43	-45	5.2	30	-2.0	3	1.3	9027	8.2	12510	28	0.5				
56-44	7894-104.5994-2-11-	0-004960	13090	-0.06	123	-267	35	-26	6.8	17	-0.7	3	0.4	1411	12.5	4306	20	0.3				
56-44	9850-104.6569-2-15-	0-004961	56390	-0.14	709	4838	67	-92	10.9	62	3.9	4	1.3	49060	5.9	17110	42	0.5				
56-44	9947-104.6214-2-15-	0-004962	60270	-0.20	-232	3220	81	-98	15.9	55	4.3	4	1.7	76050	6.2	13160	56	0.5				
56-44	9697-104.6775-2-15-	0-004964	87470	-0.23	747	8976	75	-54	14.3	125	8.5	5	1.7	35390	6.0	19100	68	0.4				
56-44	9539-104.6964-2-15-	0-004965	46550	-0.11	690	7875	61	-165	18.8	51	3.3	4	0.9	63610	4.6	-7552	39	0.5				
56-44	9544-104.7281-2-15-	0-004966	79970	-0.17	399	5402	75	-79	9.0	73	5.4	4	1.1	16710	4.2	22050	47	0.4				
56-44	9744-104.7844-2-15-	0-004967	54740	-0.19	725	16840	73	-62	8.6	80	5.4	4	1.8	31500	5.9	15850	51	0.8				
56-44	9550-104.7722-2-15-	0-004968	79250	-0.23	771	7050	73	-66	10.1	89	8.4	4	1.2	36090	5.3	19770	43	0.3				
56-44	9778-104.7828-2-15-	0-004969	64720	-0.10	787	12510	51	-70	14.0	61	3.5	4	0.9	15470	4.6	18400	28	0.3				
56-44	9756-104.7714-2-15-	0-004970	72630	-0.15	674	4893	57	-53	8.3	81	5.0	4	1.3	17590	4.6	17560	37	0.3				
56-44	9489-104.8486-2-15-	0-004971	58540	-0.17	755	3951	62	-46	7.0	59	5.0	4	1.5	18460	6.1	18280	38	0.5				
56-44	9064-104.7631-2-15-	0-004974	57460	-0.21	620	3884	73	-75	17.3	58	5.7	4	1.4	58200	6.4	14750	48	0.3				
56-44	9164-104.7522-2-15-	0-004975	71040	-0.11	680	14230	58	-60	13.2	67	3.6	4	1.0	14870	3.4	18400	27	0.3				
56-44	8694-104.7978-2-15-	0-004976	53520	-0.12	547	3953	71	-65	7.0	48	3.7	4	1.0	16110	8.1	15270	40	0.4				
56-44	8489-104.7661-2-15-	0-004977	23860	-0.14	174	-400	52	46	5.4	36	-2.4	3	1.2	8651	15.0	7668	45	0.3				
56-44	8375-104.7861-2-15-	0-004979	42030	-0.17	430	-851	64	-61	14.3	46	-2.9	5	1.3	39440	11.7	13450	40	0.5				
56-44	8547-104.8539-2-15-	0-004980	38450	-0.07	518	4593	54	-78	10.3	41	1.7	4	0.9	18930	9.3	16920	28	0.3				
56-44	8542-104.8703-2-15-	0-004981	59170	-0.14	396	4762	63	-94	9.8	52	4.1	3	1.1	23300	6.0	16420	39	0.4				
56-44	8183-104.8303-2-15-	0-004982	51590	-0.15	450	4615	70	-59	11.0	47	3.9	5	1.6	31390	7.4	19040	27	0.4				
56-44	8136-104.7983-2-15-	0-004984	50520	-0.17	445	8588	60	-74	21.3	61	5.2	4	1.6	49480	6.5	14830	41	0.5				
56-44	7989-104.8006-2-15-	0-004985	39140	-0.07	379	2942	38	-53	11.5	31	1.8	3	0.7	14530	3.8	9880	23	0.3				
56-44	8031-104.7983-2-15-	0-004986	39550	-0.10	204	2249	43	-44	7.1	31	2.5	3	0.7	18140	4.7	8642	26	0.4				
56-44	7703-104.8150-2-15-	0-004987	51980	-0.16	559	6538	84	-88	18.6	48	3.7	4	2.0	51430	6.2	10580	26	0.6				
56-44	7650-104.8239-2-15-	0-004988	47740	-0.17	692	12090	67	-72	18.4	52	-3.0	4	1.7	45890	6.6	8976	35	0.5				
56-44	9125-104.7861-2-15-	0-004990	57760	-0.09	640	-608	49	-62	12.4	50	3.1	4	0.9	9712	5.8	16120	29	0.3				
56-44	9339-104.8294-2-15-	0-004991	81500	-0.14	677	10770	79	-51	9.6	83	6.2	5	1.1	21810	5.2	20470	50	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	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	
56-44.9356-104.6244-2-15-	0-W04933	12100	376	2975	-66	-4	10.7	5.0	-242	-3	-2	14.6	3976	74	5.8	-27	0.340					
56-44.9531-104.6106-2-15-	0-W04934	10190	889	3298	41	-3	6.2	4.6	-391	-1	-1	9.4	3720	69	3.4	48	0.422					
56-44.9789-104.5589-2-15-	0-W04936	11250	504	3769	72	-4	9.0	4.9	-262	-2	-1	13.7	3461	85	4.2	-83	0.370					
56-44.9683-104.5697-2-99-	0-W04937	9289	1603	4521	-71	-4	9.7	6.6	-469	-3	-2	13.8	2476	80	5.5	146	0.528					
56-44.8769-104.5911-2-15-	0-W04939	10990	1362	1431	-100	-6	3.8	4.1	-510	-6	-2	6.8	3638	88	-5.8	-69	0.731					
56-44.8361-104.6053-2-99-	0-W04940	-2139	368	2131	19	-2	4.2	3.3	-237	-1	-1	5.9	3417	56	3.2	26	0.907					
56-44.9592-104.5186-2-15-	0-W04941	7844	2010	2313	-38	-4	9.5	6.1	-467	-1	-1	10.6	2786	98	3.5	-99	0.388					
56-44.9267-104.5447-2-15-	0-W04942	10480	310	3983	-69	-4	13.5	8.2	-209	-3	-2	13.7	4936	134	-3.4	-103	0.307					
56-44.9033-104.5606-2-15-	0-W04943	7409	553	1791	-65	-4	10.8	5.9	-264	-3	-2	10.8	4193	70	4.8	-130	0.365					
56-44.8933-104.5611-2-15-	0-W04944	3882	372	1251	-17	-2	5.8	3.3	-235	-1	-1	8.3	3970	60	3.6	37	0.449					
56-44.8522-104.5081-2-15-	0-W04945	3584	335	1728	-45	-4	5.4	4.3	-226	-2	-1	7.6	3551	48	3.5	-73	0.528					
56-44.8661-104.5414-2-99-	0-W04946	4649	228	3337	-64	-4	6.1	4.9	-193	-3	-1	8.5	3790	62	2.2	-92	0.539					
56-44.8747-104.5753-2-11-	0-W04947	3013	255	1088	-61	-4	5.4	4.4	-191	-3	-2	7.2	4307	38	-3.5	-92	0.662					
56-44.8217-104.5814-2-15-	0-W04949	7944	1460	2332	-22	-3	6.9	6.3	-489	-1	-1	8.8	3785	84	3.6	42	0.581					
56-44.8225-104.5531-2-15-	0-W04949	-3057	1016	1572	-43	-4	5.4	4.1	-353	-2	-1	7.4	2465	55	3.1	-67	0.476					
56-44.8225-104.5403-2-15-	0-W04950	9857	268	4054	-48	-3	3.2	1.7	-184	-2	-1	5.0	1990	22	-2.4	-70	0.286					
56-44.8250-104.5267-2-11-	0-W04951	4546	545	1373	-65	-4	7.5	4.8	-270	-3	-2	7.8	3826	74	-3.6	-92	0.394					
56-44.8114-104.5800-2-15-	0-W04952	-3416	1239	1707	-16	-2	4.5	4.0	-409	-1	-1	7.2	3412	49	3.2	45	0.524					
56-44.7642-104.6064-2-12-	0-W04953	12930	363	4016	48	-4	7.0	4.0	-238	-2	-1	7.6	2900	65	4.2	-65	0.582					
56-44.7750-104.5486-2-15-	0-W04954	12960	190	4836	-62	-4	7.0	5.1	224	-3	-1	7.6	3355	69	4.4	-88	0.370					
56-44.7728-104.5111-2-15-	0-W04955	12500	290	4358	-59	-4	7.2	4.1	-209	-3	-1	8.1	2720	51	5.2	-76	0.322					
56-44.7569-104.6306-2-15-	0-W04956	14610	467	4317	51	-3	6.6	3.7	-304	-1	-1	6.8	3525	64	2.5	86	0.322					
56-44.7664-104.6553-2-15-	0-W04957	3005	362	1595	-43	-4	6.3	3.7	-239	-2	-1	8.3	3728	56	3.3	-64	0.564					
56-44.7631-104.6550-2-15-	0-W04958	4552	283	1557	-62	-4	5.9	3.4	-206	-3	-1	8.0	3535	47	-3.9	-29	0.383					
56-44.7914-104.6183-2-11-	0-W04959	9475	187	4832	-44	-3	3.4	2.7	-162	-2	-1	5.8	1901	28	-2.3	-65	0.331					
56-44.7894-104.5994-2-11-	0-W04960	-1167	62	1002	-12	-1	2.1	2.4	-115			4.6	3055	22	2.0	-21	0.502					
56-44.9850-104.6569-2-15-	0-W04961	9968	1714	3799	50	-4	9.7	6.1	-461	-2	-1	12.9	2702	101	5.1	127	0.582					
56-44.9947-104.6214-2-15-	0-W04962	15480	2093	2649	-78	-5	9.9	6.5	-571	-3	-2	15.2	2864	83	5.9	-60	0.509					
56-44.9697-104.6775-2-15-	0-W04964	16050	343	3411	117	-5	15.7	6.2	-257	-3	-2	15.7	4040	194	-4.7	148	0.327					
56-44.9539-104.6964-2-15-	0-W04965	-7332	3096	3504	-28	-3	8.2	5.7	-781	-1	-1	10.7	2604	66	4.5	126	0.744					
56-44.9544-104.7281-2-15-	0-W04966	10850	495	6500	-51	-5	10.4	5.5	-316	-2	-2	18.2	3142	101	5.0	-79	0.370					
56-44.9744-104.7844-2-15-	0-W04967	14030	429	5588	-75	-4	9.1	4.0	-281	-3	-2	11.1	3300	144	-3.5	145	0.372					
56-44.9550-104.7722-2-15-	0-W04968	16740	207	6998	113	-5	14.7	4.8	-240	-3	-2	13.9	3903	140	6.1	72	0.383					
56-44.9778-104.7828-2-15-	0-W04969	17020	304	5711	-24	-3	8.2	4.6	-295	-1	-1	8.1	3746	147	2.6	-56	0.496					
56-44.9756-104.7714-2-15-	0-W04970	13870	134	3794	-52	-5	11.1	5.6	-211	-2	-1	11.1	3863	163	-3.8	-82	0.429					
56-44.9489-104.8486-2-15-	0-W04971	10000	101	4083	-73	-4	8.3	5.2	-177	-4	-2	11.4	3566	112	-4.0	-103	0.299					
56-44.9054-104.7631-2-15-	0-W04974	8084	1182	3881	-79	-5	10.1	4.5	-414	-5	-2	12.8	2458	89	-4.6	143	0.496					
56-44.9164-104.7522-2-15-	0-W04975	13290	137	3885	52	-3	8.5	3.9	-258	-1	-1	10.2	3442	136	2.6	61	0.406					
56-44.8694-104.7978-2-15-	0-W04976	8083	500	5019	-39	-3	6.6	4.7	-258	-2	-1	9.6	2621	68	3.1	-62	0.507					
56-44.8489-104.7661-2-15-	0-W04977	3284	103	1820	-61	-3	4.3	4.4	-138	-3	-1	6.9	3533	47	-3.2	-88	0.614					
56-44.8375-104.7861-2-15-	0-W04979	6549	927	3942	-62	-4	8.1	5.8	-328	-3	-1	9.6	3936	68	5.3	84	0.467					
56-44.8547-104.8539-2-15-	0-W04980	3526	796	7613	23	-2	3.8	3.8	-342	-1	-1	7.1	2527	50	3.1	82	0.577					
56-44.8542-104.9703-2-15-	0-W04981	10550	1003	9877	-48	-4	8.2	5.5	-385	-2	-1	11.9	3130	87	4.8	-75	0.509					
56-44.8183-104.8303-2-15-	0-W04982	9765	952	3149	-64	-3	7.5	6.8	-301	-3	-1	10.3	3690	76	4.7	-86	0.255					
56-44.8136-104.7983-2-15-	0-W04984	6803	1456	3107	-65	-4	10.4	5.2	-414	-3	-2	11.5	3154	79	3.5	-142	0.305					
56-44.7989-104.8006-2-15-	0-W04985	6848	676	2597	29	-2	4.4	3.6	-308	-1	1	5.6	2204	49	2.6	-40	0.355					
56-44.8031-104.7983-2-15-	0-W04986	5356	517	2240	-34	-3	5.9	3.4	-227	-1	-1	6.2	2183	54	-1.9	-60	0.318					
56-44.7703-104.8150-2-15-	0-W04987	11630	1947	1933	-68	-4	9.5	6.5	-503	-3	-2	9.6	3209	82	4.3	-98	0.391					
56-44.7650-104.8239-2-15-	0-W04988	8868	1342	3332	-63	-4	9.5	6.0	-391	-3	-2	9.7	3480	76	-3.3	-37	0.354					
56-44.9125-104.7861-2-15-	0-W04989	7965	218	4904	43	-3	6.6	3.9	-244	-1	-1	9.7	4111	106	-2.2	95	0.377					
56-44.9339-104.8294-2-15-	0-W04991	13100	182	3697	55	-4	12.4	5.2	-201	-2	-2	16.3	3676	152	5.1	107	0.320					

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

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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	LAS. 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	
56-44.9583-104.8872-2-15-						0-404902	-5	-5	-5	40	-20	33	15	-10	-15		2	54
56-44.9025-104.7919-2-15-						0-404903	-5	-5	-5	27	-20	-15	5	-10	-15		2	37
56-44.9033-104.8461-2-15-						0-404904	-5	-5	-5	39	-20	30	13	-10	-15		2	72
56-44.9033-104.8592-2-15-						0-404905	-5	-5	-5	14	-20	21	10	-10	-15		2	52
56-44.8008-104.8450-2-15-						0-404906	-5	-5	-5	23	-20	27	10	-10	-15		2	44
56-44.9222-104.9403-2-15-						0-404907	-5	-5	-5	33	-20	15	13	-10	-15		3	55
56-44.9356-104.9936-2-15-						0-404908	-5	-5	-5	28	-20	16	8	-10	-15		3	108
56-44.9236-104.9850-2-15-						0-404909	-5	-5	-5	33	-20	30	10	-10	-15		3	59
56-44.8572-104.9914-2-15-						0-404910	-5	-5	-5	28	-20	-15	8	-10	-15		2	43
56-44.8606-104.9772-2-15-						0-404911	-5	-5	-5	27	-20	21	9	-10	-15		2	40
56-44.8303-104.9719-2-15-						0-404912	-5	-5	-5	31	-20	47	8	-10	-15		2	44
56-44.8306-104.9583-2-15-						0-404913	-5	-5	-5	28	-20	28	15	-10	-15		3	70
56-44.7911-104.9383-2-15-						0-404914	-5	-5	-5	30	-20	27	9	-10	-15		2	81
56-44.7631-104.7511-2-15-						0-404915	-5	-5	-5	18	-20	-15	5	-10	-15		2	31
56-44.7578-104.7581-2-15-						0-404916	-5	-5	-5	18	-20	-15	5	-10	-15		1	30
56-44.7706-104.8422-2-15-						0-404917	-5	-5	-5	37	-20	30	15	-10	-15		3	65
56-44.7606-104.8736-2-15-						0-404918	-5	-5	-5	38	-20	20	10	-10	-15		3	37
56-44.7794-104.8856-2-15-						0-404919	-5	-5	-5	30	-20	-15	14	-10	-15		2	30
56-44.7558-104.9722-2-15-						0-404920	-5	-5	-5	20	-20	-15	-5	-10	-15		2	33
56-44.7531-104.9989-2-15-						0-404921	-5	-5	-5	20	-20	-15	-5	-10	-15		2	28
56-44.7706-104.9225-2-15-						0-404922	-5	-5	-5	24	-20	-15	15	-10	-15		2	61
56-44.7939-104.8736-2-15-						0-404923	-5	-5	-5	33	-20	37	5	-10	-15		2	68
56-44.7978-104.9042-2-15-						0-404924	-5	-5	-5	37	-20	17	12	-10	-15		2	46
56-44.9883-104.8706-2-15-						0-404925	-5	-5	-5	28	-20	-15	7	-10	-15		2	53
56-44.9739-104.8639-2-15-						0-404926	-5	-5	-5	24	-20	35	7	-10	-15		2	65
56-44.5056-104.4247-2-12-						0-404927	-5	7	-5	43	-20	15	50	-10	-15		4	34
56-44.5214-104.3761-2-12-						0-404928	-5	-5	-5	21	-20	-15	14	-10	-15		2	36
56-44.5039-104.3547-2-15-						0-404929	-5	-5	-5	12	-20	21	6	-10	-15		2	38
56-44.5392-104.3606-2-15-						0-404930	-5	-5	-5	31	-20	-15	9	-10	-15		2	45
56-44.5017-104.4097-2-15-						0-404931	-5	-5	-5	42	-20	15	12	-10	-15		4	32
56-44.5136-104.2747-2-99-						0-404932	-5	-5	-5	24	-20	-15	20	-10	-15		1	25
56-44.5536-104.3161-2-15-						0-404933	-5	-5	-5	19	-20	-15	-5	-10	-15		1	21
56-44.5528-104.3417-2-12-						0-404934	-5	-5	-5	13	-20	-15	-5	-10	-15		1	26
56-44.5586-104.3289-2-15-						0-404935	-5	-5	-5	16	-20	-15	10	-10	-15		2	26
56-44.5664-104.2564-2-15-						0-404936	-5	-5	-5	23	-20	-15	5	-10	-15		1	21
56-44.5867-104.2508-2-13-						0-404937	-5	-5	-5	20	-20	20	5	-10	-15		2	73
56-44.5919-104.2813-2-99-						0-404938	-5	-5	-5	19	-20	22	15	-10	-15		-1	17
56-44.5800-104.3536-2-12-						0-404939	-5	-5	-5	23	-20	-15	7	-10	-15		1	28
56-44.5708-104.4119-2-15-						0-404940	-5	-5	-5	18	-20	-15	8	-10	-15		2	27
56-44.5756-104.4364-2-99-						0-404941	-5	-5	-5	25	-20	-15	15	-10	-15		2	34
56-44.6036-104.4123-2-99-						0-404942	-5	-5	-5	33	-20	-15	17	-10	-15		1	35
56-44.6731-104.2847-2-15-						0-404943	-5	-5	-5	-10	-20	-15	-5	-10	-15		-1	6
56-44.6664-104.3253-2-99-						0-404944	-5	-5	-5	25	-20	-15	-5	-10	-15		-1	20
56-44.6953-104.2717-2-12-						0-404945	-5	-5	-5	18	-20	-15	6	-10	-15		1	13
56-44.7172-104.3189-2-15-						0-404946	-5	-5	-5	21	-20	19	-5	-10	-15		-1	14
56-44.7336-104.2875-2-15-						0-404947	-5	-5	-5	18	-20	-15	7	-10	-15		-1	28
56-44.7433-104.3008-2-99-						0-404948	-5	-5	-5	12	-20	-15	7	-10	-15		1	17
56-44.7536-104.3097-2-15-						0-404949	-5	-5	-5	18	-20	-15	-5	-10	-15		-1	15
56-44.7633-104.3139-2-15-						0-404950	-5	-5	-5	13	-20	-15	9	-10	-15		-1	11
56-44.5125-104.4772-2-15-						0-404945	-5	-5	-5	30	-20	-15	19	-10	-15		-1	25
56-44.6553-104.2839-2-15-						0-404946	-5	-5	-5	13	-20	-15	6	-10	-15		1	18

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
56-44.9583-104.8872-2-15-	0-W04902	55140	-0.17	1024	29150	90	-51	12.4	74	6.6	5	1.7	27260	5.3	16990	29	0.5					
56-44.9025-104.7919-2-15-	0-W04903	49040	-0.07	567	2615	52	-56	5.5	51	2.9	4	0.9	12580	6.8	15050	35	0.4					
56-44.9033-104.8461-2-15-	0-W04904	52470	-0.10	684	4357	63	-51	8.1	61	3.5	5	1.1	15340	4.5	20030	35	0.4					
56-44.9033-104.8592-2-15-	0-W04905	60420	-0.13	764	7870	56	-51	14.2	71	4.1	5	1.0	17500	6.5	17980	43	0.4					
56-44.8008-104.8450-2-15-	0-W04906	49640	-0.07	470	2418	51	-63	13.8	37	2.6	4	0.9	21520	5.0	12450	31	0.4					
56-44.9222-104.9409-2-15-	0-W04907	62690	-0.11	904	11830	66	-62	9.6	86	5.1	4	1.0	23310	5.3	19410	41	0.4					
56-44.9356-104.7936-2-15-	0-W04908	72250	-0.11	1000	9443	66	-51	9.9	87	6.2	5	1.1	17400	3.9	18180	33	0.4					
56-44.9236-104.9850-2-15-	0-W04909	75370	-0.13	592	-585	66	-51	13.5	80	5.7	5	1.1	20770	4.5	19720	44	0.4					
56-44.8572-104.9914-2-15-	0-W04900	63770	-0.08	1218	7251	49	-74	13.7	56	3.1	4	0.9	16570	4.5	15750	29	0.3					
56-44.8606-104.9772-2-15-	0-W04901	59710	-0.09	710	9599	55	-57	6.6	68	4.4	4	1.0	16340	5.7	17240	30	0.3					
56-44.8303-104.9719-2-15-	0-W04902	71470	-0.12	631	19340	53	183	12.9	59	4.5	3	1.0	22990	3.0	14890	32	0.3					
56-44.8306-104.9583-2-15-	0-W04903	76350	-0.14	734	3261	65	-53	13.1	72	5.2	5	1.1	20330	4.7	20730	40	0.5					
56-44.7911-104.9383-2-15-	0-W04904	64750	-0.09	892	7887	46	-61	15.5	63	3.9	4	0.8	14910	3.5	16600	30	0.3					
56-44.7531-104.7511-2-15-	0-W04905	40460	-0.07	284	4848	59	-46	7.1	44	2.0	4	0.9	9848	9.5	11170	32	0.4					
56-44.7578-104.7581-2-15-	0-W04907	31740	-0.07	329	2387	47	-36	6.5	35	1.7	4	0.7	6295	8.7	12120	26	0.3					
56-44.7706-104.8622-2-15-	0-W04908	79340	-0.09	589	4059	69	-69	17.0	71	4.6	7	1.3	20920	4.2	12460	46	0.5					
56-44.7606-104.8736-2-15-	0-W04909	66350	-0.08	284	4509	59	-69	13.6	59	4.3	4	1.1	32600	5.6	14270	38	0.4					
56-44.7794-104.8856-2-15-	0-W04910	44060	-0.08	378	2457	59	-51	10.9	41	2.7	4	1.0	20490	5.0	10010	38	0.3					
56-44.7558-104.9722-2-15-	0-W04911	48970	-0.09	584	4798	43	-51	9.3	33	3.1	3	0.8	13340	5.7	16980	40	0.2					
56-44.7531-104.9989-2-15-	0-W04912	56240	-0.07	655	4756	46	-68	12.3	43	2.3	4	0.7	11400	4.9	16960	24	0.3					
56-44.7706-104.9225-2-15-	0-W04913	68630	-0.10	656	9560	68	-58	9.3	95	5.3	4	1.1	17780	5.4	18010	47	0.4					
56-44.7939-104.8736-2-15-	0-W04914	43740	-0.11	-414	14050	81	-243	26.2	50	3.2	4	1.3	25766	5.0	-10860	52	0.5					
56-44.7978-104.9042-2-15-	0-W04915	62430	-0.12	520	5792	63	-56	13.7	52	4.3	5	0.9	21060	5.2	18180	41	0.4					
56-44.9883-104.8706-2-15-	0-W04916	53710	-0.07	1641	24510	57	-78	13.7	61	2.8	4	1.0	14960	6.0	13540	31	0.3					
56-44.9739-104.8639-2-15-	0-W04917	59940	-0.09	763	12850	67	-56	7.9	77	5.0	4	1.0	16810	5.9	16110	35	0.4					
56-44.5056-104.4247-2-12-	0-W04918	51460	0.15	1042	8730	380	-101	11.2	47	3.3	9	4.0	15670	9.3	14840	205	0.6					
56-44.5214-104.3761-2-12-	0-W04919	53280	-0.11	749	12680	97	-84	11.4	43	3.2	4	1.5	12330	10.1	19350	64	0.4					
56-44.5039-104.3547-2-15-	0-W04920	47590	-0.07	377	22900	56	-69	11.6	46	2.5	3	0.9	11230	7.8	15880	34	0.3					
56-44.5392-104.3606-2-15-	0-W04921	52370	-0.08	501	26170	76	162	6.6	32	3.0	3	1.0	12700	7.7	18810	34	0.3					
56-44.5017-104.4097-2-15-	0-W04922	50610	-0.09	871	5341	97	-75	8.6	39	2.9	11	2.1	12180	9.1	16610	53	0.9					
56-44.5136-104.2747-2-39-	0-W04923	40340	-0.13	293	13590	36	-71	6.5	37	4.1	3	1.1	16240	6.5	18920	-13	-0.2					
56-44.5536-104.3161-2-15-	0-W04924	36620	-0.05	274	3959	33	-42	9.6	27	1.6	3	0.7	7620	3.8	12890	17	0.2					
56-44.5528-104.3417-2-12-	0-W04925	38330	-0.07	299	38760	35	-54	3.6	26	2.1	2	0.7	6115	6.3	16350	22	0.3					
56-44.5586-104.3282-2-15-	0-W04926	34080	-0.06	365	19720	28	-53	5.2	19	1.5	2	0.6	5760	5.9	16200	17	0.3					
56-44.5664-104.2564-2-15-	0-W04928	38110	-0.09	430	24530	44	-47	9.2	31	2.9	3	0.7	10020	7.2	16310	25	0.2					
56-44.5867-104.2508-2-13-	0-W04929	60750	-0.09	296	65790	44	-80	15.8	41	2.9	4	0.8	16340	3.3	25880	26	0.2					
56-44.5919-104.2819-2-99-	0-W04930	34670	-0.08	313	4593	50	-32	5.0	34	1.8	4	0.9	5159	10.7	6999	30	0.5					
56-44.5800-104.3536-2-12-	0-W04931	39190	-0.07	614	18960	55	-48	6.8	35	1.9	4	1.1	9922	11.6	14940	29	0.3					
56-44.5708-104.4119-2-15-	0-W04932	52970	-0.11	549	32640	48	-50	12.7	43	3.0	4	0.8	18230	5.2	18570	37	0.4					
56-44.5756-104.4364-2-99-	0-W04933	55110	-0.07	635	7170	60	-80	12.4	39	3.0	4	0.8	11380	7.7	19450	33	0.3					
56-44.6036-104.4128-2-99-	0-W04934	42350	-0.08	482	3808	58	-64	4.8	51	3.0	4	1.0	15770	11.3	15960	32	0.5					
56-44.6731-104.2847-2-15-	0-W04935	14510	-0.05	263	1408	33	-22	3.7	23	-0.8	3	0.5	2785	19.4	4916	22	0.4					
56-44.6664-104.3253-2-99-	0-W04936	37440	-0.09	348	3869	52	-38	9.1	38	-1.5	4	0.8	8128	11.5	9585	34	0.4					
56-44.6953-104.2717-2-12-	0-W04937	28030	-0.06	276	2441	43	49	10.6	28	-0.9	3	0.5	4575	12.1	5194	18	0.3					
56-44.7172-104.3189-2-15-	0-W04938	32370	-0.06	208	2234	52	-27	3.7	33	1.0	3	0.7	7365	10.4	6360	31	0.3					
56-44.7336-104.2875-2-15-	0-W04939	35640	-0.07	342	2094	43	-37	5.4	24	-1.1	3	0.8	8009	7.0	6843	19	0.2					
56-44.7433-104.3008-2-39-	0-W04940	34630	-0.08	488	38470	30	-58	7.3	30	1.8	3	0.7	7600	7.9	16510	20	0.2					
56-44.7536-104.3097-2-15-	0-W04942	24230	-0.05	550	11160	28	-35	8.3	19	1.0	3	0.5	4945	10.2	8281	18	0.3					
56-44.7633-104.3139-2-15-	0-W04943	25120	-0.06	223	5358	37	48	4.2	33	-0.9	3	0.6	7134	10.7	5749	22	0.3					
56-44.5125-104.4772-2-15-	0-W04945	42670	-0.09	720	8023	60	-79	8.9	46	2.4	4	1.0	11810	7.4	20960	36	0.3					
56-44.6553-104.2839-2-15-	0-W04946	31950	-0.09	385	9609	42	-35	9.3	33	-1.4	4	0.7	7770	12.1	8181	29	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	REF. DATE	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	
56-44.9583-104.8872-2-15-	0-004900	19030	209	3957	-71	-4	9.3	6.0	-206	-3	-2	9.7	3564	217	-4.3	114	0.576					
56-44.9025-104.7919-2-15-	0-004900	5511	163	5741	45	-2	6.3	4.0	-182	-1	-1	9.4	2952	79	3.2	101	0.383					
56-44.9033-104.8461-2-15-	0-004900	10310	163	4201	54	-3	3.3	6.3	-201	-1	-1	12.6	4361	117	3.6	108	0.336					
56-44.9033-104.8592-2-15-	0-004900	15870	199	4114	56	-4	10.2	5.0	-211	-1	-1	11.1	3863	144	4.6	57	0.348					
56-44.8008-104.8450-2-15-	0-004900	7301	1004	2411	30	-2	6.7	4.6	-374	-1	-1	9.5	2733	71	3.0	-54	0.348					
56-44.9222-104.9408-2-15-	0-004900	17730	327	4199	44	-3	10.7	4.6	-258	-1	-1	9.7	3591	197	3.7	115	0.382					
56-44.9356-104.9936-2-15-	0-004900	18130	175	3229	41	-4	10.7	5.4	-212	-1	-1	9.0	4782	214	2.7	108	0.397					
56-44.9236-104.9850-2-15-	0-004900	15560	193	4169	55	-4	11.9	4.3	-215	-1	-1	12.7	4112	126	-3.2	-43	0.428					
56-44.8572-104.9914-2-15-	0-004900	13410	251	7926	49	-3	7.0	3.2	-269	-1	-1	7.8	3506	102	3.1	72	0.504					
56-44.8606-104.9772-2-15-	0-004900	14490	195	4745	58	-3	8.9	4.5	-202	-1	-1	9.4	3132	145	2.5	119	0.346					
56-44.8303-104.9719-2-15-	0-004900	22860	514	4883	57	-4	10.1	4.7	-315	-1	-1	8.3	3215	142	-3.0	110	0.748					
56-44.8306-104.9583-2-15-	0-004900	13010	189	4156	69	-4	11.7	4.9	-215	-1	-1	13.4	3819	130	5.6	116	0.404					
56-44.7911-104.9383-2-15-	0-004900	16840	185	4411	56	-3	8.6	3.6	-261	-1	-1	6.8	3687	180	3.1	67	0.465					
56-44.7531-104.7511-2-15-	0-004900	4687	510	1914	-18	-2	6.6	4.5	-261	2	-1	8.7	3479	72	4.0	82	0.522					
56-44.7578-104.7581-2-15-	0-004900	3651	261	2769	-17	-2	4.5	4.3	-197	-1	-1	7.4	3103	62	2.1	35	0.454					
56-44.7558-104.8622-2-15-	0-004900	10210	945	2588	35	-3	10.3	7.6	-437	-1	-1	10.6	3959	101	5.1	117	0.401					
56-44.7606-104.8735-2-15-	0-004900	11630	1322	1717	43	-3	11.3	5.6	-381	-1	-1	10.6	3070	99	3.7	106	0.375					
56-44.7794-104.8856-2-15-	0-004900	6154	924	1528	39	-2	5.2	10.0	-322	-1	-1	8.2	3095	96	2.7	-41	3.152					
56-44.7939-104.9722-2-15-	0-004900	8505	337	4135	44	-3	6.4	4.0	-217	-1	-1	7.8	2644	55	3.5	92	0.299					
56-44.7531-104.9989-2-15-	0-004900	9626	321	4411	39	-2	5.8	4.0	-266	-1	-1	6.6	2732	59	2.1	-57	0.361					
56-44.7706-104.9225-2-15-	0-004900	17330	185	4211	60	-3	10.8	5.1	-223	-1	-1	10.3	3996	169	4.2	116	0.385					
56-44.9739-104.8736-2-15-	0-004900	25460	5027	6383	-29	-3	7.5	11.7		-2	-1	8.1	2485	67	3.3	119	3.683					
56-44.7978-104.9042-2-15-	0-004900	11640	371	3909	68	-4	9.7	3.9	-259	-1	-1	11.4	3294	104	3.0	111	0.359					
56-44.9883-104.8706-2-15-	0-004900	16480	609	6047	29	-2	6.6	3.6	-348	-1	-1	8.5	3730	134	3.2	80	0.480					
56-44.9739-104.8639-2-15-	0-004900	14480	170	4522	61	-3	9.6	4.1	-201	-1	-1	9.6	3716	177	3.0	111	0.405					
56-44.5056-104.4247-2-12-	0-004900	8627	1830	5222	50	-3	6.0	29.1	-559	-1	2	35.9	3520	104	6.3	-125	0.309					
56-44.5214-104.3761-2-12-	0-004900	11500	713	9568	48	-3	6.1	7.7	-347	-1	-1	14.3	3342	57	-2.7	-39	0.248					
56-44.5039-104.3547-2-15-	0-004900	25930	526	4721	49	-2	5.4	3.8	-318	-1	-1	7.8	3389	60	2.2	36	0.332					
56-44.5392-104.3606-2-15-	0-004900	11610	529	7730	39	-2	6.3	4.7	-292	-1	-1	12.0	2567	65	-1.5	86	0.268					
56-44.5017-104.4097-2-15-	0-004900	8674	725	6350	32	-3	6.6	11.9	-351	-1	1	18.6	2848	87	5.7	50	0.249					
56-44.5136-104.2747-2-99-	0-004900	12870	439	5469	-45	-3	6.3	3.5	-296	-2	-1	6.2	2518	36	-2.7	-63	0.295					
56-44.5536-104.3161-2-15-	0-004900	7089	216	2421	27	-2	4.1	2.4	-193			4.3	2023	39	1.5	18	0.347					
56-44.5528-104.3417-2-12-	0-004900	9496	122	4256	-17	-2	3.9	2.8	-177	-1	-1	4.4	2169	44	2.3	24	0.598					
56-44.5586-104.3289-2-15-	0-004900	9560	319	4896	34	-2	3.0	2.4	-213	-1	-1	3.2	2270	28	2.5	-25	0.425					
56-44.5664-104.2564-2-15-	0-004900	12730	315	3354	-23	-3	5.7	2.6	-209	-1	-1	5.2	2496	42	2.4	39	0.400					
56-44.5867-104.2508-2-13-	0-004900	41020	482	4619	51	-3	3.7	3.6	-355	-1	-1	6.7	3766	78	3.3	82	0.525					
56-44.5919-104.2819-2-99-	0-004900	3860	102	955	-19	-2	5.4	4.3	-156	-1	-1	6.8	3020	51	3.1	52	0.521					
56-44.5800-104.3536-2-12-	0-004900	11200	310	3216	32	-2	5.2	4.5	-213	-1	-1	8.0	2808	47	3.0	-35	0.280					
56-44.5708-104.4119-2-15-	0-004900	18870	460	2689	48	-3	8.7	3.4	-262	-1	-1	7.8	3259	70	-2.1	-40	0.300					
56-44.5756-104.4364-2-99-	0-004900	10790	411	7861	40	-2	5.3	4.1	-310	-1	-1	10.2	3055	73	2.9	35	0.318					
56-44.6036-104.4128-2-90-	0-004900	7763	125	7452	43	-2	5.8	4.6	-197	-1	-1	9.1	2776	58	3.5	106	0.326					
56-44.6731-104.2847-2-15-	0-004900	2485	87	656	-12	-1	2.3	3.0	-109	-1		4.7	2733	18	2.8	-17	0.460					
56-44.6664-104.3253-2-99-	0-004900	3845	253	1919	-22	-3	6.2	5.0	-196	-1	-1	6.6	3667	43	3.9	-33	0.456					
56-44.6953-104.2717-2-12-	0-004900	3601	249	1179	-13	-2	3.5	2.6	-205			5.9	2578	41	2.8	-21	0.422					
56-44.7172-104.3189-2-15-	0-004900	4064	145	901	-15	-2	5.8	3.7	-143	-1	-1	7.8	2959	43	3.8	-25	0.306					
56-44.7336-104.2875-2-15-	0-004900	5903	150	2424	-16	-2	5.2	2.6	-160			6.2	2803	44	3.1	31	0.353					
56-44.7433-104.3008-2-99-	0-004900	13780	330	5936	-21	-2	4.4	2.0	-219	-1	-1	4.6	2071	29	2.2	47	0.383					
56-44.7536-104.3097-2-15-	0-004900	5404	157	1620	-11	-1	3.1	2.3	-165			4.5	2261	25	2.5	-17	0.384					
56-44.7633-104.3139-2-15-	0-004900	3048	229	919	-15	-2	4.0	2.9	-166	-1	-1	5.7	2340	34	2.4	-20	0.347					
56-44.5125-104.4772-2-15-	0-004900	9653	1090	5599	44	-3	5.0	3.9	-415	-1	-1	8.4	4007	67	-2.1	-75	0.400					
56-44.6553-104.2839-2-15-	0-004900	4543	265	1525	-20	-3	5.5	3.4	-182	-1	-1	6.3	3240	37	3.2	-30	0.390					

[illegible]

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

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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	
56-44.6422-104.3339-2-12-	0-404947	-5	-5	-5	-10	-20	-15	5	-10	-15	-1	11						
56-44.6892-104.3461-2-99-	0-404949	-5	-5	-5	15	-20	-15	-5	-10	-15	-1	14						
56-44.6975-104.3800-2-99-	0-404949	-5	-5	-5	13	-20	-15	7	-10	-15	-1	16						
56-44.6319-104.3781-2-99-	0-404951	-5	-5	-5	20	-20	-15	6	-10	-15	-1	20						
56-44.6594-104.3811-2-12-	0-404952	-5	-5	-5	15	-20	-15	5	-10	-15	-1	41						
56-44.6714-104.4572-2-15-	0-404953	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	20						
56-44.6672-104.4592-2-15-	0-404954	-5	-5	-5	11	-20	-15	-5	-10	-15	1	22						
56-44.6500-104.4528-2-12-	0-404955	-5	-5	-5	17	-20	-15	-5	-10	-15	-1	24						
56-44.6442-104.4600-2-15-	0-404956	-5	-5	-5	17	-20	-15	-5	-10	-15	-1	21						
56-44.6286-104.4317-2-15-	0-404957	-5	-5	-5	19	-20	-15	-5	-10	-15	1	25						
56-44.6322-104.4461-2-12-	0-404958	-5	-5	-5	19	-20	-15	6	-10	-15	-1	13						
56-44.7392-104.4589-2-15-	0-404959	-5	-5	-5	-10	-20	-15	14	-10	-15	1	18						
56-44.7800-104.4799-2-15-	0-404960	-5	-5	-5	17	-20	-15	8	-10	-15	1	30						
56-44.7772-104.4469-2-99-	0-404961	-5	-5	-5	19	-20	-15	9	-10	-15	1	28						
56-44.7969-104.4406-2-15-	0-404962	-5	-5	-5	17	-20	-15	-5	-10	-15	2	28						
56-44.8122-104.4872-2-99-	0-404963	-5	-5	-5	22	-20	-15	11	-10	-15	-1	29						
56-44.8250-104.4222-2-15-	0-404964	-5	-5	-5	25	-20	-15	5	-10	-15	-1	38						
56-44.8400-104.4003-2-12-	0-404965	-5	-5	-5	20	-20	-15	10	-10	-15	1	34						
56-44.8111-104.4247-2-15-	0-404966	-5	-5	-5	16	-20	-15	5	-10	-15	1	39						
56-44.5769-104.4808-2-15-	0-404969	-5	-5	-5	24	-20	-15	11	-10	-15	1	25						
56-44.5892-104.4947-2-99-	0-404970	-5	-5	-5	15	-20	-15	-5	-10	-15	1	32						
56-44.5486-104.4681-2-15-	0-404970	-5	-5	-5	25	-20	-15	12	-10	-15	-1	85						
56-44.8683-104.4567-2-99-	0-404972	-5	-5	-5	22	-20	-15	-5	-10	-15	-1	18						
56-44.8456-104.4267-2-15-	0-404973	-5	-5	-5	23	-20	-15	8	-10	-15	1	42						
56-44.9031-104.4172-2-15-	0-404975	-5	-5	-5	28	-20	16	15	-10	-15	2	32						
56-44.9789-104.4469-2-15-	0-404977	-5	-5	-5	30	-20	-15	8	-10	-15	2	33						
56-44.9725-104.4992-2-15-	0-404979	-5	-5	-5	19	-20	15	16	-10	-15	2	41						
56-44.5294-104.4694-2-15-	0-404979	-5	-5	-5	29	-20	17	7	-10	-15	-1	69						
46-44.7906-104.0331-2-15-	0-404980	-5	-5	-5	38	-20	35	18	-10	-15	-1	104						
46-44.7853-104.0447-2-15-	0-404981	-5	-5	-5	30	-20	25	6	-10	-15	2	47						
46-44.7681-104.0308-2-12-	0-404982	-5	-5	-5	21	-20	45	20	-10	-15	1	42						
46-44.8169-104.0117-2-15-	0-404984	-5	-5	-5	32	-20	27	13	-10	-15	2	123						
56-44.8047-104.0678-2-99-	0-404985	-5	-5	-5	39	-20	25	22	-10	-15	2	41						
56-44.8794-104.0722-2-15-	0-404987	-5	-5	-5	12	-20	-15	8	-10	-15	1	27						
56-44.8850-104.0933-2-15-	0-404988	-5	-5	-5	21	-20	-15	9	-10	-15	1	37						
56-44.8475-104.0667-2-15-	0-404989	-5	-5	-5	27	-20	18	8	-10	-15	2	42						
56-44.8336-104.0964-2-15-	0-404990	-5	-5	-5	31	-20	30	19	-10	-15	3	29						
56-44.8381-104.1175-2-15-	0-404991	-5	-5	-5	27	-20	-15	12	-10	-15	2	40						
56-44.8561-104.1667-2-15-	0-404992	-5	-5	-5	28	-20	-15	-5	-10	-15	2	29						
56-44.8533-104.1875-2-15-	0-404993	-5	-5	-5	39	-20	15	5	-10	-15	2	34						
56-44.8494-104.1902-2-15-	0-404994	-5	-5	-5	31	-20	21	12	-10	-15	2	41						
56-44.8053-104.1617-2-15-	0-404995	-5	-5	-5	32	-20	-15	16	-10	-15	2	28						
56-44.8064-104.1072-2-15-	0-404996	-5	-5	-5	42	-20	37	28	-10	-15	3	44						
56-44.7764-104.1531-2-15-	0-404997	-5	-5	-5	38	-20	26	16	-10	-15	1	11						
56-44.8119-104.2811-2-15-	0-404999	-5	-5	-5	11	-20	-15	-5	-10	-15	1	11						
56-44.7931-104.2214-2-15-	0-405000	-5	-5	-5	12	-20	-15	-5	-10	-15	2	26						
56-44.7669-104.2239-2-15-	0-405001	-5	-5	-5	29	-20	18	10	-10	-15	2	41						
56-44.7611-104.1078-2-15-	0-405002	-5	-5	-5	24	-20	16	19	-10	-15	2	26						
56-44.8656-104.1225-2-15-	0-405003	-5	-5	-5	32	-20	20	16	-10	-15	2	31						
56-44.8369-104.1425-2-15-	0-405004	-5	-5	-5	13	-20	16	12	-10	-15	2	40						
56-44.9383-104.2197-2-15-	0-405007	-5	-5	-5	32	-20	-15	6	-10	-15	3	33						

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

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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
56-44.6422-104.3339-2-12-	0-404947	20300	-0.06	220	-566	62	-31	11.0	40	0.7	5	1.3	7126	40.7	3558	34	0.7					
56-44.6892-104.3461-2-99-	0-404948	18370	-0.05	200	1890	35	-39	3.4	20	-0.8	2	0.7	3744	11.8	5539	20	0.3					
56-44.6975-104.3800-2-99-	0-404949	25730	-0.07	476	4443	45	-54	5.2	39	1.6	3	0.7	4486	16.1	8541	23	0.4					
56-44.6319-104.3781-2-99-	0-404951	40080	-0.11	352	3032	51	-46	16.3	35	-1.8	4	0.8	16530	9.7	7519	22	0.4					
56-44.6594-104.3811-2-12-	0-404952	46240	-0.07	528	29560	40	-58	12.5	40	2.2	4	0.9	11310	8.7	14360	25	0.4					
56-44.6714-104.4572-2-15-	0-404953	30520	-0.05	365	39340	25	-55	2.5	18	1.4	2	0.6	4568	6.2	15150	14	0.2					
56-44.6672-104.4592-2-15-	0-404954	34250	-0.06	465	34550	37	78	4.8	17	1.5	2	0.7	6188	6.9	15020	18	0.3					
56-44.6500-104.4528-2-12-	0-404955	32370	-0.10	363	3784	44	67	9.1	34	-1.5	4	0.8	6706	11.6	10160	31	0.3					
56-44.6442-104.4600-2-15-	0-404956	37610	-0.06	481	6147	29	-67	10.4	28	1.6	3	0.6	6612	7.9	14800	15	0.3					
56-44.6286-104.4317-2-15-	0-404957	53150	-0.08	402	12540	65	-62	7.9	46	3.0	4	1.0	14570	6.7	16800	42	0.4					
56-44.6322-104.4461-2-12-	0-404958	30120	-0.06	420	29630	24	-53	4.6	20	1.4	2	0.6	4545	6.9	14380	14	0.2					
56-44.7392-104.4589-2-15-	0-404959	36150	-0.09	717	30530	42	-56	6.3	22	-1.7	3	1.4	12920	9.0	14660	-8	0.3					
56-44.7800-104.4782-2-15-	0-404960	29870	-0.04	506	42270	25	-61	8.0	16	1.2	2	0.6	4698	8.3	13170	16	0.2					
56-44.7772-104.4469-2-99-	0-404961	40720	-0.07	464	18270	38	-61	4.9	32	1.9	2	0.8	10050	6.3	15430	22	0.2					
56-44.7969-104.4406-2-15-	0-404962	44450	-0.08	493	20790	53	-52	7.4	47	2.5	4	0.9	11620	5.3	14410	21	0.3					
56-44.8122-104.4872-2-99-	0-404963	35130	-0.12	732	28720	36	114	7.4	35	3.7	3	1.2	18420	6.2	11800	-12	0.3					
56-44.8250-104.4222-2-15-	0-404964	50130	-0.07	858	74020	39	-70	11.6	35	2.1	3	0.8	13340	4.4	19410	24	0.3					
56-44.8400-104.4003-2-12-	0-404965	50540	-0.09	498	54650	61	-77	7.8	47	3.2	4	1.0	15830	8.4	14850	32	0.5					
56-44.8111-104.4247-2-15-	0-404966	43150	-0.07	461	32410	49	-56	5.9	24	2.2	3	0.9	10210	7.0	15950	25	0.3					
56-44.5769-104.4808-2-15-	0-404968	46320	-0.11	503	5929	48	-54	10.5	46	4.0	3	0.7	12810	6.7	17330	29	0.3					
56-44.5892-104.4947-2-99-	0-404969	43320	-0.06	404	3427	34	-53	9.7	31	1.8	3	0.5	8426	7.5	18380	23	0.3					
56-44.5486-104.4661-2-15-	0-404970	53950	-0.09	610	9522	67	-77	7.8	58	3.5	4	1.0	15030	9.0	21240	32	0.4					
56-44.8683-104.4567-2-99-	0-404972	23140	-0.09	231	7102	32	66	5.8	32	-1.8	3	0.7	8835	10.8	7379	-9	0.3					
56-44.8456-104.4267-2-15-	0-404973	42460	-0.06	1161	36630	33	-70	11.1	26	2.0	4	0.4	8992	5.7	16680	20	0.3					
56-44.9031-104.4172-2-15-	0-404975	65940	-0.09	439	2901	63	-65	9.9	60	4.7	4	0.9	20110	6.2	11550	35	0.4					
56-44.9789-104.4469-2-15-	0-404977	60370	-0.08	350	4736	64	-59	8.8	45	3.3	5	0.8	16930	7.2	14240	34	0.4					
56-44.9725-104.4992-2-15-	0-404978	54780	-0.10	365	3248	57	-55	13.7	38	4.7	4	0.9	21210	7.4	14280	34	0.4					
56-44.5294-104.4694-2-15-	0-404979	57320	-0.07	481	4664	59	-77	12.2	43	3.1	4	1.0	13166	7.3	23210	34	0.4					
46-44.7906-104.0331-2-15-	0-404980	65120	-0.08	571	3362	56	-51	6.5	65	4.5	5	1.1	37980	7.9	16990	33	0.5					
46-44.7853-104.0447-2-15-	0-404981	41440	-0.09	-235	-1681	57	-128	10.8	34	3.0	3	1.0	41390	6.3	9978	33	0.4					
46-44.7681-104.0308-2-12-	0-404982	69340	-0.11	486	-1048	74	-76	15.6	54	4.7	6	1.0	20760	4.4	12900	54	0.4					
46-44.8169-104.0117-2-15-	0-404984	72070	-0.09	693	46480	55	-58	13.6	80	5.3	4	0.8	16800	3.4	18150	34	0.4					
56-44.8047-104.0678-2-99-	0-404985	74670	-0.08	391	3686	69	-62	8.6	49	5.3	4	0.9	19670	4.9	15650	40	0.6					
56-44.8794-104.0722-2-15-	0-404987	30200	-0.06	556	-415	45	-40	4.5	38	1.6	3	0.7	6182	11.9	13720	28	0.4					
56-44.8850-104.0933-2-15-	0-404988	48630	-0.10	669	3221	49	-46	7.9	53	3.5	4	0.8	10700	5.4	16990	30	0.3					
56-44.8475-104.0667-2-15-	0-404989	65580	-0.07	433	23160	57	-58	12.7	64	4.2	4	0.8	15080	4.4	14780	37	0.3					
56-44.8335-104.0964-2-15-	0-404990	65560	-0.09	352	5036	66	-81	16.0	52	4.9	4	1.0	29410	5.4	14750	39	0.4					
56-44.8381-104.1175-2-15-	0-404991	60650	-0.09	436	3583	73	-51	7.1	48	3.8	4	0.9	19600	4.3	11560	33	0.4					
56-44.9561-104.1667-2-15-	0-404992	59110	-0.11	451	3002	51	-55	11.3	54	4.0	5	0.8	15140	6.5	13120	44	0.5					
56-44.8533-104.1875-2-15-	0-404993	66400	-0.07	525	3505	54	-65	11.4	53	4.1	4	1.0	20220	5.9	17030	34	0.4					
56-44.8494-104.1908-2-15-	0-404994	63050	-0.09	392	6257	70	105	6.5	39	4.4	4	0.9	27270	5.1	10750	40	0.5					
56-44.8053-104.1617-2-15-	0-404995	62750	-0.08	632	4453	65	-52	6.5	33	4.3	4	0.9	22720	4.4	10850	31	0.3					
56-44.8064-104.1072-2-15-	0-404996	67530	-0.13	626	3816	72	-99	16.5	60	4.7	5	1.1	37880	4.5	19660	50	0.4					
56-44.7764-104.1531-2-15-	0-404997	84210	-0.08	659	-765	61	-51	12.9	65	4.4	5	1.1	23230	4.9	15410	40	0.4					
56-44.8119-104.2811-2-15-	0-404999	25760	-0.06	259	2537	56	-39	4.0	38	1.1	3	1.1	6011	20.4	8204	32	0.4					
56-44.7931-104.2214-2-15-	0-405000	22870	-0.06	167	1960	39	-27	5.4	22	-0.9	3	0.7	5699	9.1	6673	20	0.3					
56-44.7669-104.2239-2-15-	0-405001	45030	-0.11	373	5820	52	-50	13.2	45	-1.8	5	1.0	12210	8.6	10660	40	0.4					
56-44.7611-104.1078-2-15-	0-405002	75560	-0.08	406	12330	65	-75	15.3	54	4.6	6	0.9	16940	4.6	17710	37	0.4					
56-44.8656-104.1225-2-15-	0-405003	73790	-0.09	327	3031	66	-47	5.6	51	5.7	3	0.7	25340	3.8	13810	41	0.3					
56-44.8869-104.1425-2-15-	0-405004	50760	-0.07	548	5205	61	-58	8.4	37	3.0	4	0.8	15340	5.7	13290	31	0.3					
56-44.9383-104.2197-2-15-	0-405007	62600	-0.12	663	16970	58	-55	14.6	71	4.8	5	1.0	17440	5.9	16460	42	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	LAC 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	
56-44.6422-104.3339-2-12-	0-W04047	2622	317	747	-14	-2	3.9	4.2	-215								8.8	3750	35	4.5	-21	0.522
56-44.6892-104.3461-2-99-	0-W04048	-1725	311	2022	-13	-2	2.5	2.5	-188						-1		5.0	2653	23	2.6	-30	0.360
56-44.6975-104.3800-2-99-	0-W04049	4457	450	4047	-15	-2	2.7	3.4	-249						-1	-1	7.1	3916	29	2.8	54	0.365
56-44.6319-104.3781-2-99-	0-W04051	4498	594	1719	-23	-4	7.1	3.6	-292						-1	-1	6.9	3021	75	2.8	-67	0.345
56-44.6594-104.3811-2-12-	0-W04052	14580	207	2018	41	-2	5.6	3.8	-284						-1	-1	7.6	2945	55	2.4	-23	0.289
56-44.6714-104.4572-2-15-	0-W04053	14060	270	5273	-12	-1	2.9	2.1	-187						-1		4.2	1558	16	1.5	29	0.343
56-44.6672-104.4592-2-15-	0-W04054	15640	297	5009	24	-2	3.5	3.1	-210						-1	-1	4.6	2132	33	2.5	-26	0.400
56-44.6500-104.4528-2-12-	0-W04055	4092	262	211	-24	-3	5.6	3.7	-203						-1	-1	6.8	3893	45	2.8	43	0.424
56-44.6442-104.4600-2-15-	0-W04056	6253	290	5433	30	-2	3.4	3.0	-300						-1	-1	4.3	2293	30	2.3	51	0.449
56-44.6286-104.4317-2-15-	0-W04057	12840	408	4509	58	-2	7.5	4.5	-287						-1	-1	8.3	3091	60	3.2	75	0.273
56-44.6322-104.4461-2-12-	0-W04058	2193	231	5529	29	-2	2.5	2.0	320						-1		3.4	1680	26	1.8	-26	0.662
56-44.7392-104.4589-2-15-	0-W04059	7964	297	5606	-22	-2	4.9	3.6	-207						-1	-1	6.5	2345	36	3.5	-41	0.291
56-44.7800-104.4789-2-15-	0-W04060	10770	426	4156	-12	-1	2.6	2.1	-265								3.5	1907	26	2.2	51	0.554
56-44.7772-104.4469-2-99-	0-W04061	10490	320	4578	-19	-2	4.8	3.1	-237						-1	-1	5.6	2240	38	-1.3	50	0.307
56-44.7969-104.4406-2-15-	0-W04062	15340	308	2487	-21	-2	5.9	3.9	-238						-1	-1	7.0	2758	57	2.3	-30	0.284
56-44.8122-104.4872-2-99-	0-W04063	10160	596	3843	-41	-3	5.9	3.0	-314						-2	-1	6.3	2547	39	2.4	-60	0.337
56-44.8250-104.4222-2-15-	0-W04064	20210	565	2765	49	-2	6.3	3.4	-317						-1	-1	6.0	3161	64	2.3	82	0.353
56-44.8400-104.4003-2-12-	0-W04065	17800	590	4241	-24	-3	7.3	4.6	-341						-1	-1	9.5	2903	69	4.1	-28	0.298
56-44.8111-104.4247-2-15-	0-W04066	17860	270	4656	-18	-2	5.0	3.6	-238						-1	-1	5.8	2520	45	1.7	74	0.338
56-44.5769-104.4808-2-15-	0-W04068	10880	290	2265	-28	-3	6.6	2.5	-254						-1	-1	6.4	2982	49	-2.3	85	0.327
56-44.5892-104.4947-2-99-	0-W04069	8283	320	3496	46	-2	4.2	2.7	-245						-1	-1	5.5	2740	40	2.2	62	0.375
56-44.5886-104.4681-2-15-	0-W04070	16550	440	6558	-24	-3	7.7	4.5	559						-1	-1	9.4	3564	67	3.7	-45	0.310
56-44.8583-104.4567-2-99-	0-W04072	2530	154	770	-34	-2	4.5	3.0	-164						-2	-1	6.9	3378	50	-2.1		0.277
56-44.8456-104.4267-2-15-	0-W04073	23700	444	5617	26	-2	4.4	2.6	-297						-1	-1	4.8	2531	38	2.4	33	0.383
56-44.9031-104.4172-2-15-	0-W04075	9151	866	2538	68	-3	8.8	5.4	-349						-1	-1	12.3	2336	93	2.9	-28	0.525
56-44.9789-104.4469-2-15-	0-W04077	11040	564	4320	-21	-2	7.3	4.9	-276						-1	-1	9.5	3221	71	2.3	53	0.356
56-44.9725-104.4992-2-15-	0-W04078	10020	800	2890	-28	-3	8.9	6.1	-314						-1	-1	9.5	3121	74	4.5	113	0.338
56-44.5294-104.4634-2-15-	0-W04079	14730	378	8117	63	-2	6.2	3.6	-297						-1	-1	8.2	4099	60	2.9	68	0.367
46-44.7906-104.0331-2-15-	0-W04080	10140	326	4288	51	3	9.8	6.5	288						1	-1	13.6	2865	124	3.2	99	0.399
46-44.7853-104.0447-2-15-	0-W04081	13010	2092	11630	-27	-3	5.5	5.9	-585						-1	-1	10.5	2202	64	3.8	125	0.660
46-44.7681-104.0308-2-12-	0-W04082	17860	1318	3416	-29	-4	10.0	5.1	-425						-1	-1	15.9	2840	82	4.1	-59	0.446
46-44.8169-104.0117-2-15-	0-W04084	15850	130	2825	66	-3	10.2	4.2	243						-1	-1	9.3	3935	161	2.5	103	0.613
56-44.8047-104.0678-2-99-	0-W04085	10780	530	4053	-22	-3	10.0	4.8	-278						-1	-1	14.4	2599	95	3.6	129	0.436
56-44.8794-104.0722-2-15-	0-W04087	3429	91	4309	-14	-2	3.3	3.9	171						-1	-1	7.3	3262	53	3.8	35	0.471
56-44.8850-104.0933-2-15-	0-W04088	8001	83	4300	-26	-3	7.2	4.6	-162						-1	-1	8.2	3118	90	-1.9	-45	0.368
56-44.8475-104.0667-2-15-	0-W04089	10400	278	3552	31	-2	7.7	4.7	-256						-1	-1	10.2	3486	119	2.6	-68	0.402
56-44.8336-104.0964-2-15-	0-W04090	9546	1370	3246	60	-3	9.2	5.2	-419						-1	-1	14.4	2407	84	3.7	103	0.407
56-44.8381-104.1175-2-15-	0-W04091	10180	372	2924	-24	-3	7.4	6.4	-254						-1	-1	12.6	3103	75	4.0	-85	0.462
56-44.8561-104.1667-2-15-	0-W04092	14000	212	4567	-27	-3	7.8	3.8	-238						-1	-1	12.4	3197	79	4.5	125	0.485
56-44.8533-104.1875-2-15-	0-W04093	14790	580	3672	40	-2	7.6	5.0	-342						-1	-1	11.7	3683	105	2.8	80	0.736
56-44.8494-104.1908-2-15-	0-W04094	2258	652	4178	28	-3	8.2	6.2	-320						-1	-1	13.4	2415	87	4.9	85	0.499
56-44.8053-104.1617-2-15-	0-W04095	9797	480	3255	49	-3	6.8	4.7	-266						-1	-1	13.1	2269	76	3.0	112	0.497
56-44.8064-104.1072-2-15-	0-W04096	9692	2095	2705	82	-4	11.4	4.9	-554						-1	-1	14.2	3533	112	5.3	116	0.515
56-44.7764-104.1531-2-15-	0-W04097	13180	471	2318	69	-3	11.2	4.7	-290						-1	-1	10.1	4757	133	3.1	87	0.433
56-44.8119-104.2811-2-15-	0-W04098	-1870	260	2325	-15	-2	3.6	4.0	-182						-1	-1	7.9	3581	36	3.6	26	0.397
56-44.7931-104.2214-2-15-	0-W05000	2700	194	1008	-15	-2	3.1	3.5	-161						-1	-1	5.4	3043	34	2.2	36	0.609
56-44.7669-104.2239-2-15-	0-W05001	7771	466	2718	-28	-3	7.1	4.4	-276						-1	-1	8.1	3749	64	2.6	-39	0.502
56-44.7611-104.1078-2-15-	0-W05002	14790	623	4537	51	-3	8.9	4.9	-369						-1	-1	9.7	3844	103	3.8	76	0.329
56-44.8656-104.1225-2-15-	0-W05003	10770	325	2489	56	-3	9.9	3.3	-231						-1	-1	12.2	2520	95	2.7	129	0.459
56-44.8869-104.1425-2-15-	0-W05004	7603	810	4396	38	-2	5.7	4.4	-319						-1	-1	9.3	3117	68	2.8	61	0.466
56-44.9383-104.2197-2-15-	0-W05007	16660	255	4085	60	-4	9.7	5.0	-226						-1	-1	10.8	3295	110	2.6	101	0.406

[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	LAS. 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	
56-44.9553-104.2294-2-15-						0-405000	-5	-5	-5	35	-20	28	16	-10	-15		3	47
56-44.9669-104.2117-2-99-						0-405010	-5	-5	-5	33	-20	26	14	-10	-15		2	50
56-44.9100-104.2294-2-15-						0-405011	-5	-5	-5	34	-20	40	5	-10	-15		1	10
56-44.7808-104.2675-2-99-						0-405012	-5	-5	-5	-10	-20	-15	8	-10	-15		1	6
56-44.7908-104.2594-2-99-						0-405013	-5	-5	-5	20	-20	-15	-5	-10	-15		1	15
56-44.7844-104.2931-2-15-						0-405014	-5	-5	-5	15	-20	-15	11	-10	-15		1	10
56-44.7814-104.2917-2-15-						0-405015	-5	-5	-5	-10	-20	18	8	-10	-15		1	13
56-44.8089-104.2700-2-15-						0-405016	-5	-5	-5	26	-20	-15	-5	-10	-15		2	80
56-44.8056-104.3511-2-15-						0-405017	-5	-5	-5	14	-20	-15	-5	-10	-15		-1	17
56-44.8200-104.3693-2-15-						0-405019	-5	-5	-5	15	-20	-15	-5	-10	-15		-1	7
56-44.8833-104.3725-2-15-						0-405020	-5	-5	-5	16	-20	-15	19	-10	-15		2	29
56-44.8908-104.3647-2-15-						0-405021	-5	-5	-5	18	-20	-15	11	-10	-15		2	16
56-44.9164-104.3525-2-15-						0-405022	-5	-5	-5	20	-20	-15	11	-10	-15		2	41
56-44.8972-104.2481-2-99-						0-405023	-5	-5	-5	32	-20	17	13	-10	-15		2	37
46-44.8875-104.0094-2-15-						0-405024	-5	-5	-5	35	-20	29	12	-10	-15		3	103
46-44.9086-104.0347-2-15-						0-405025	-5	-5	-5	20	-20	30	7	-10	-15		3	68
46-44.9125-104.0383-2-15-						0-405026	-5	-5	-5	29	-20	18	9	-10	-15		3	53
46-44.9417-104.0394-2-15-						0-405027	-5	-5	-5	21	-20	19	8	-10	-15		2	41
56-44.9531-104.0700-2-15-						0-405028	-5	-5	-5	19	-20	19	13	-10	-15		2	45
56-44.9108-104.2806-2-15-						0-405029	-5	-5	-5	36	-20	-15	13	-10	-15		3	71
56-44.9533-104.3122-2-15-						0-405030	-5	-5	-5	28	-20	40	6	-10	-15		2	87
56-44.9467-104.3317-2-15-						0-405031	-5	-5	-5	29	-20	22	-5	-10	-15		2	31
56-44.9908-104.3536-2-15-						0-405032	-5	-5	-5	30	-20	25	5	-10	-15		2	24
56-44.8056-104.2092-2-15-						0-405034	-5	-5	-5	38	-20	-15	7	-10	-15		1	19
56-44.9397-104.0561-2-15-						0-405035	-5	-5	-5	23	-20	19	6	-10	-15		2	48
56-44.9366-104.1017-2-15-						0-405036	-5	-5	-5	27	-20	28	10	-10	-15		2	43
56-44.9444-104.1436-2-15-						0-405037	-5	-5	-5	22	-20	17	8	-10	-15		2	67
56-44.9742-104.1736-2-15-						0-405039	-5	-5	-5	22	-20	-15	5	-10	-15		2	41
56-44.9308-104.0683-2-15-						0-405039	-5	-5	-5	30	-20	-15	5	-10	-15		2	46
56-44.5031-104.2839-2-15-						0-405041	-5	-5	-5	19	-20	-15	-5	-10	-15		2	35
56-44.9375-104.4378-2-15-						0-405042	-5	-5	-5	15	-20	-15	11	-10	-15		2	24
56-44.8856-104.4717-2-15-						0-405043	-5	-5	-5	26	-20	-15	9	-10	-15		2	39
56-44.8481-104.4925-2-15-						0-405044	-5	-5	-5	16	-20	-15	10	-10	-15		2	33
56-44.6750-104.4097-2-15-						0-405045	-5	-5	-5	15	-20	-15	-5	-10	-15		2	27
56-44.3169-104.1700-2-15-						0-405049	-5	-5	-5	22	-20	16	-5	-10	-15		2	27
46-44.3092-104.0536-2-11-						0-405053	-5	-5	-5	-10	-20	-15	-5	-10	-15		-1	9
46-44.3256-104.0055-2-12-						0-405055	-5	-5	-5	24	-20	26	5	-10	-15		2	25
46-44.3169-104.0014-2-15-						0-405056	-5	-5	-5	20	-20	-15	10	-10	-15		1	16
46-44.3511-104.0264-2-12-						0-405057	-5	-5	-5	11	-20	-15	-5	-10	-15		1	18
56-44.3614-104.0619-2-15-						0-405059	-5	-5	-5	35	-20	37	13	-10	-15		2	42
56-44.3603-104.0939-2-15-						0-405060	-5	-5	-5	37	-20	19	10	-10	-15		2	39
56-44.3664-104.1361-2-15-						0-405062	-5	-5	-5	24	-20	-15	-5	-10	-15		2	24
56-44.3822-104.1494-2-15-						0-405063	-5	-5	-5	17	-20	-15	8	-10	-15		2	28
56-44.3803-104.1214-2-15-						0-405064	-5	-5	-5	23	-20	23	5	-10	-15		2	30
56-44.3969-104.1308-2-15-						0-405065	-5	-5	-5	26	-20	15	7	-10	-15		2	23
56-44.4022-104.1436-2-15-						0-405066	-5	-5	-5	15	-20	-15	-5	-10	-15		1	17
56-44.4411-104.1472-2-15-						0-405068	-5	-5	-5	48	-20	17	-5	57	-15		4	86
56-44.4614-104.1211-2-15-						0-405070	-5	-5	-5	16	-20	-15	5	-10	-15		1	21
56-44.4800-104.1156-2-12-						0-405071	-5	-5	-5	13	-20	-15	-5	-10	-15		-1	8
56-44.4967-104.0989-2-12-						0-405072	-5	-5	-5	34	-20	-15	7	-10	-15		3	136
56-44.4967-104.0628-2-15-						0-405073	-5	-5	-5	12	-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	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	
56-44.9553-104.2294-2-15-	0-W05009	51850	-0.08	423	5462	60	-82	15.9	49	3.3	4	0.8	20430	4.3	14990	39	0.4						
56-44.9669-104.2117-2-99-	0-W05010	57110	-0.08	1033	9948	58	-48	7.4	77	4.4	4	1.1	17950	6.3	18470	33	0.4						
56-44.9160-104.2294-2-15-	0-W05011	55780	-0.08	623	14110	60	55	7.2	59	4.4	5	0.9	12640	4.4	16930	30	0.4						
56-44.7808-104.2675-2-99-	0-W05012	16840	-0.07	163	-393	36	-27	7.0	29	-1.1	3	0.6	5169	13.5	5490	22	0.4						
56-44.7908-104.2594-2-99-	0-W05013	21850	-0.05	255	6471	31	154	11.2	23	-0.9	3	0.5	4144	9.2	7836	18	0.2						
56-44.7844-104.2931-2-15-	0-W05014	26980	-0.07	252	4640	90	-50	5.1	53	-1.1	5	1.5	7154	41.1	8842	51	0.6						
56-44.7814-104.2917-2-15-	0-W05015	26650	-0.06	329	3497	63	-47	5.5	41	-1.0	4	0.7	5234	24.1	9439	37	0.4						
56-44.8089-104.2700-2-15-	0-W05016	68060	-0.14	414	-995	78	-65	15.9	78	4.2	7	1.5	23970	6.0	21970	55	0.5						
56-44.8056-104.3611-2-15-	0-W05017	34700	-0.06	254	3079	36	-44	10.1	21	1.3	3	0.6	6235	8.6	5990	22	0.3						
56-44.8200-104.3683-2-15-	0-W05019	20360	-0.05	208	13180	24	-38	2.2	20	-0.9	2	0.4	4533	10.8	7445	16	0.2						
56-44.8833-104.3725-2-15-	0-W05020	47690	-0.08	298	2968	45	-34	6.4	40	2.7	4	0.8	12120	11.3	8927	27	0.5						
56-44.8908-104.3647-2-15-	0-W05021	34010	-0.08	247	2157	41	-28	6.6	22	2.0	4	0.7	8377	13.7	5920	28	0.5						
56-44.9164-104.3525-2-15-	0-W05022	49480	-0.09	348	3615	52	-38	8.5	32	2.9	5	0.7	12280	8.0	9546	33	0.4						
56-44.8972-104.2481-2-99-	0-W05023	77710	-0.08	607	5701	52	-50	9.2	59	4.7	5	1.1	16600	4.2	16790	38	0.4						
46-44.8875-104.0094-2-15-	0-W05024	91620	-0.11	772	4779	80	63	8.1	101	7.4	4	1.2	19640	3.4	22340	44	0.4						
46-44.9086-104.0347-2-15-	0-W05025	56980	-0.10	900	10680	67	54	9.5	76	5.7	4	1.0	14950	4.4	19890	30	0.4						
46-44.9125-104.0383-2-15-	0-W05026	64020	-0.12	782	10230	60	-48	13.7	63	5.4	4	1.1	16470	5.3	18520	46	0.3						
46-44.9417-104.0394-2-15-	0-W05027	52200	-0.07	791	17540	47	-52	10.8	54	3.1	4	0.7	12760	4.1	15480	22	0.3						
56-44.9531-104.0700-2-15-	0-W05028	49840	-0.07	729	19840	56	-50	6.3	61	3.4	3	1.0	15870	6.0	15220	31	0.4						
56-44.9108-104.2806-2-15-	0-W05029	91760	-0.09	695	6298	67	-43	7.1	70	5.3	4	0.9	17820	5.0	22020	44	0.5						
56-44.9533-104.3122-2-15-	0-W05030	69240	-0.13	656	48290	66	-62	12.9	66	5.9	5	1.1	23680	4.5	17300	46	0.3						
56-44.9467-104.3317-2-15-	0-W05031	59330	-0.07	721	23940	57	-66	10.8	48	3.6	5	1.0	16500	6.0	14090	29	0.3						
56-44.9908-104.3536-2-15-	0-W05032	49480	-0.07	285	117500	68	-56	4.7	54	3.2	5	1.0	13640	4.9	10780	39	0.4						
56-44.8056-104.2092-2-15-	0-W05034	50190	-0.08	534	7362	62	-52	8.5	46	3.1	4	1.0	14480	7.6	13880	36	0.4						
56-44.9397-104.0561-2-15-	0-W05035	51930	-0.10	835	17980	51	-47	11.7	54	4.2	4	0.9	16630	5.7	17170	41	0.3						
56-44.9386-104.1017-2-15-	0-W05036	51540	-0.07	887	3277	45	93	10.3	55	3.2	4	1.0	10450	5.1	16070	29	0.4						
56-44.9444-104.1436-2-15-	0-W05037	60670	-0.09	534	37200	57	86	6.3	66	3.6	3	0.9	16470	3.8	15020	41	0.3						
56-44.9742-104.1736-2-15-	0-W05038	57720	-0.08	610	2466	56	-41	6.4	64	4.1	4	0.8	11620	6.0	18830	37	0.4						
56-44.9308-104.0683-2-15-	0-W05039	50940	-0.11	545	5372	52	149	10.8	41	4.7	4	1.0	13570	5.2	16970	36	0.4						
56-44.5031-104.2839-2-15-	0-W05041	55420	-0.07	460	15350	41	-70	10.8	34	2.5	4	0.7	12220	4.8	25030	25	0.3						
56-44.9375-104.4378-2-15-	0-W05042	45610	-0.07	513	6158	67	-72	6.0	35	2.7	4	1.0	12810	11.0	11600	36	0.4						
56-44.8856-104.4717-2-15-	0-W05043	49800	-0.08	522	2731	69	417	7.9	52	3.0	5	1.0	11780	8.5	12560	35	0.5						
56-44.8481-104.4925-2-15-	0-W05044	40810	-0.10	379	-552	57	-40	11.4	43	2.6	5	1.0	11900	12.1	11770	47	0.4						
56-44.6750-104.4097-2-15-	0-W05045	42280	-0.06	473	17200	42	-53	9.6	28	1.8	4	0.6	8542	7.9	12420	22	0.3						
56-44.3169-104.1760-2-15-	0-W05048	40780	-0.08	525	6717	43	-57	7.4	42	2.0	3	0.8	8902	7.8	17180	22	0.2						
46-44.3092-104.0536-2-11-	0-W05053	18800	-0.07	341	39030	26	102	6.3	22	-0.9	2	0.5	3650	22.9	10020	20	0.4						
46-44.3256-104.0056-2-12-	0-W05055	35380	-0.07	449	19630	43	-55	6.1	42	2.3	4	0.7	8816	16.4	12880	25	0.3						
46-44.3169-104.0014-2-15-	0-W05056	34440	-0.10	332	6562	32	-58	11.3	38	2.2	2	-0.3	8164	8.3	10620	-11	0.2						
46-44.3511-104.0264-2-12-	0-W05057	27550	-0.04	398	33370	25	98	7.1	21	-0.7	2	0.6	5027	6.5	13310	15	0.2						
56-44.3614-104.0619-2-15-	0-W05059	59160	-0.10	809	13020	57	-97	8.7	74	3.1	12	3.1	15660	5.2	12130	110	0.6						
56-44.3603-104.0939-2-15-	0-W05060	59630	-0.09	662	7539	80	-109	11.8	68	3.6	5	1.4	16390	9.2	17850	43	0.5						
56-44.3654-104.1361-2-15-	0-W05062	41680	-0.09	426	8515	45	-61	10.1	48	2.4	3	0.9	10760	9.3	17360	32	0.4						
56-44.3822-104.1494-2-15-	0-W05063	42640	-0.07	558	4944	39	-73	13.1	31	2.0	3	0.7	8460	5.6	17230	22	0.2						
56-44.3803-104.1214-2-15-	0-W05064	48500	-0.07	596	18970	57	-66	5.8	49	2.7	4	1.0	13620	8.0	15500	34	0.3						
56-44.3969-104.1308-2-15-	0-W05065	39320	-0.07	422	13990	38	-56	5.8	48	2.9	3	0.7	9541	8.3	15780	21	0.3						
56-44.4022-104.1436-2-15-	0-W05066	31560	-0.08	351	30060	27	-50	8.8	33	2.1	2	0.7	8323	10.3	14960	23	0.2						
56-44.4411-104.1472-2-15-	0-W05068	34650	-0.06	255	51430	47	143	16.0	33	-1.2	3	1.0	35010	6.2	10890	25	0.2						
56-44.4614-104.1211-2-15-	0-W05070	31230	-0.06	307	31410	28	-43	3.9	40	2.6	2	0.6	8010	6.3	13410	18	0.2						
56-44.4800-104.1156-2-12-	0-W05071	16600	-0.05	267	44340	13	-35	3.0	18	1.0	1	0.4	2721	8.6	6805	-5	0.2						
56-44.4957-104.0989-2-12-	0-W05072	39640	-0.10	229	69040	53	89	11.9	26	3.2	2	1.2	19210	6.2	10710	35	0.2						
56-44.4957-104.0628-2-15-	0-W05073	17130	-0.04	230	26940	23	-29	2.1	35	1.7	2	0.5	5538	14.4	7874	15	0.2						

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	
56-44.9553-104.2294-2-15	0-405009	7674	1233	3298	49	-2	7.6	5.4	-462	-1	-1	11.1	2983	99	4.2	115	0.520					
56-44.9669-104.2117-2-99	0-405010	11530	112	3431	42	-3	9.1	5.0	-177	-1	-1	11.6	3393	164	4.2	85	0.397					
56-44.9100-104.2294-2-15	0-405011	12340	141	3344	54	-3	8.2	5.0	-180	-1	-1	11.2	3553	118	3.6	-76	0.337					
56-44.7808-104.2675-2-99	0-405012	-1341	186	1112	-17	-2	3.1	2.8	-146	-1	-1	5.1	3373	26	3.0	-41	0.424					
56-44.7908-104.2594-2-99	0-405013	4405	254	1263	-14	-2	2.4	2.4	-236	-1	-1	4.3	2972	26	2.1	-23	0.763					
56-44.7844-104.2931-2-15	0-405014	3521	409	2704	-17	-2	4.4	6.5	-257	-1	-1	13.3	4843	39	5.2		0.361					
56-44.7814-104.2917-2-15	0-405015	-2144	384	3168	28	-2	3.4	5.3	-224	-1	-1	8.9	5095	37	3.7	62	0.439					
56-44.8089-104.2700-2-15	0-405016	6815	954	2197	-36	-4	12.7	5.9	-399	-1	-1	12.6	5208	94	4.8	209	0.418					
56-44.8056-104.3511-2-15	0-405017	4111	315	1299	-14	-2	4.3	2.7	-252	-1	-1	6.4	2618	40	2.3	-13	0.366					
56-44.8200-104.3683-2-15	0-405018	5687	158	2790	-15	-1	2.1	1.9	-146	-1		3.1	1254	18	1.7	-22	0.516					
56-44.8433-104.3725-2-15	0-405020	4632	320	1570	-20	-2	5.5	4.3	-203	-1	-1	10.4	3542	49	2.9	30	0.447					
56-44.8908-104.3647-2-15	0-405021	4261	112	1159	-22	-2	4.8	3.4	-133	-1	-1	10.1	3868	30	3.9	-29	0.386					
56-44.9164-104.3525-2-15	0-405022	7847	262	2206	-23	-3	6.4	5.1	-181	-1	-1	11.9	2939	48	3.2	-65	0.458					
56-44.9972-104.2481-2-99	0-405023	10130	115	3295	54	-3	8.9	5.2	-201	-1	-1	11.1	3699	121	3.2	90	0.578					
46-44.8875-104.0094-2-15	0-405024	14610	118	2732	96	-4	14.5	5.4	-201	-1	-1	11.8	3553	255	2.8	113	0.413					
46-44.9086-104.0347-2-15	0-405025	18970	162	3776	71	-3	9.4	4.5	-199	-1	-1	10.1	4367	190	3.1	100	0.365					
46-44.9125-104.0383-2-15	0-405026	17230	158	3955	72	-4	10.6	5.3	-187	-1	-1	9.2	4054	172	3.7	135	0.363					
46-44.9417-104.0394-2-15	0-405027	20720	155	4990	-15	-2	6.4	2.7	203	-1	-1	5.9	3461	140	2.6	-66	0.488					
56-44.9531-104.0700-2-15	0-405028	21700	149	4482	29	-2	7.7	3.7	-158	-1	-1	7.8	3153	134	2.5	67	0.373					
56-44.9108-104.2806-2-15	0-405029	13310	119	2925	61	-3	10.2	5.4	168	-1	-1	14.0	3994	143	2.5	-30	0.371					
56-44.9533-104.3122-2-15	0-405030	14340	400	4229	-33	-4	11.6	5.5	-270	-1	-1	11.6	3009	136	-2.7	144	0.438					
56-44.9467-104.3317-2-15	0-405031	11150	620	3507	41	-2	5.8	4.4	-325	-1	-1	8.8	3612	97	3.1	107	0.686					
56-44.9908-104.3536-2-15	0-405032	11980	161	3659	39	-2	7.2	5.6	333	-1	-1	11.5	2055	86	4.2	78	0.450					
56-44.8056-104.2092-2-15	0-405034	10420	644	2280	-19	-2	6.3	4.7	-284	-1	-1	8.9	2759	66	2.6	-67	0.362					
56-44.9397-104.0561-2-15	0-405035	17230	148	4710	43	-3	8.6	3.8	-174	-1	-1	7.5	3498	149	3.5	-84	0.489					
56-44.9386-104.1017-2-15	0-405036	11800	85	6807	44	-2	6.1	2.8	-206	-1	-1	7.5	3514	140	2.3	-31	0.565					
56-44.9444-104.1436-2-15	0-405037	12630	141	3847	50	-3	8.7	4.3	-192	-1	-1	9.5	3014	153	2.3	122	0.519					
56-44.9742-104.1736-2-15	0-405038	10370	84	3426	59	-3	7.7	5.3	-156	-1	-1	8.7	3702	121	3.0	81	0.445					
56-44.9308-104.0683-2-15	0-405039	15370	115	22250	51	-3	8.0	3.4	-250	-1	-1	8.4	3381	94	-2.2	-49	0.530					
56-44.5031-104.2839-2-15	0-405041	18200	453	6113	32	-2	6.2	4.0	-309	-1	-1	6.1	3515	61	1.9	64	0.334					
56-44.9375-104.4378-2-15	0-405042	6254	367	7870	-18	-2	5.6	5.5	-245	-1	-1	8.9	2926	47	3.2	-67	0.388					
56-44.8856-104.4717-2-15	0-405043	5873	562	3764	-19	-2	6.8	5.3	-283	-1	-1	10.5	3906	75	3.4	59	0.391					
56-44.8481-104.4925-2-15	0-405044	4278	311	2254	40	-3	6.9	4.9	-209	-1	-1	9.0	4351	70	3.0	-25	0.444					
56-44.6750-104.4097-2-15	0-405045	9460	277	2853	34	-2	4.5	3.0	-260	-1	-1	5.8	2384	55	2.8	-23	0.348					
56-44.3169-104.1700-2-15	0-405048	7921	490	4508	-18	-2	4.5	4.8	-276	-1	-1	7.0	2551	56	2.4	104	0.366					
46-44.3092-104.0536-2-11	0-405053	48590	92	2783	-15	-2	2.2	1.6	-143	-1	-1	3.7	1667	26	2.7	-22	0.657					
46-44.3256-104.0056-2-12	0-405055	9544	205	4372	-18	-2	3.8	3.1	-222	-1	-1	6.2	3020	59	3.3	-51	0.427					
46-44.3169-104.0014-2-15	0-405056	5887	293	3577	-29	-3	3.7	2.7	345	-1	-1	5.1	2401	50	2.4	-47	0.425					
46-44.3511-104.0264-2-12	0-405057	18330	231	5425	28	-1	2.4	2.3	271			3.3	2057	25	2.0	16	0.473					
56-44.3614-104.0619-2-15	0-405059	13300	723	11490	38	-3	8.2	16.4	-385	-1	2	7.7	2823	74	4.4	94	0.394					
56-44.3603-104.0939-2-15	0-405060	9982	1200	9019	44	-3	7.7	7.4	-505	-1	-1	9.2	4093	79	5.5	115	0.461					
56-44.3664-104.1361-2-15	0-405062	8008	490	5168	-24	-3	5.1	2.5	-258	-1	-1	7.3	2365	73	2.2	79	0.364					
56-44.3822-104.1494-2-15	0-405063	6018	657	5471	-18	-2	4.1	1.9	-343	-1	-1	6.0	3250	42	-1.4	-24	0.395					
56-44.3803-104.1214-2-15	0-405064	17130	524	6433	-20	-2	6.2	4.3	-280	-1	-1	8.6	3240	63	3.1	68	0.314					
56-44.3969-104.1308-2-15	0-405065	12720	413	2922	-18	-2	4.2	2.6	-284	-1	-1	6.5	2489	80	2.7	-25	0.362					
56-44.4022-104.1436-2-15	0-405066	8754	281	3025	-20	-2	4.0	1.7	-197	-1	-1	4.9	1906	45	-1.5	-19	0.412					
56-44.4411-104.1472-2-15	0-405068	33630	940	8161	-19	-2	9.1	3.9	416	4	-1	4.7	4766	243	2.0	66	0.528					
56-44.4614-104.1211-2-15	0-405070	16320	213	1998	-18	-2	4.0	2.1	-194	-1	-1	4.6	2167	44	2.1	-28	0.430					
56-44.4800-104.1156-2-12	0-405071	5286	74	1279	-12	-1	1.4	0.8	-134	-1		2.4	1412	18	1.8	45	0.592					
56-44.4967-104.0989-2-12	0-405072	24200	374	9670	-27	-3	9.4	4.3	431	-1	-1	5.0	2974	97	-2.0	-36	0.470					
56-44.4967-104.0628-2-15	0-405073	7412	124	1466	-15	-1	2.4	1.7	-127	-1		4.0	1482	21	2.0		0.368					

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

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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																										
56-44.4756-104.0622-2-15-						0-405074-09/09/77-9-	14-		14-	-	-	-	-	-	2-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.52	
56-44.4483-104.0714-2-15-						0-405075-09/09/77-10-	15-		15-	-	-	-	-	-	11-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.10
56-44.4136-104.0958-2-12-						0-405076-09/09/77-11-	13-12.0-		7.3-	210-					11-3-7-4-6-3-3-1-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.27
56-44.4317-104.0775-2-15-						0-405077-09/09/77-12-	15-		-	-	-	-	-	-	5-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.04
56-44.3933-104.0742-2-12-						0-405078-09/09/77-13-	20-16.5-		7.7-	210-					27-3-7-4-6-3-3-1-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.74
46-44.3786-104.0469-2-15-						0-405079-09/09/77-14-	20-		-	-	-	-	-	-	16-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.59
46-44.3806-104.0139-2-15-						0-405080-09/09/77-15-	20-		-	-	-	-	-	-	19-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.57
46-44.4175-104.0381-2-12-						0-405081-09/09/77-16-	20-15.0-		7.0-	200-					22-3-7-5-6-3-3-1-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.65
46-44.4775-104.0322-2-15-						0-405082-09/09/77-17-	21-		-	-	-	-	-	-	11-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.08
46-44.4925-104.0314-2-15-						0-405083-09/09/77-18-	21-		-	-	-	-	-	-	16-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.38
56-44.4931-104.2389-2-15-						0-405084-09/10/77-8-	12-		-	-	-	-	-	-	19-1-4-5-4-	-1-	-2-4-3-3-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.58
56-44.4936-104.1631-2-15-						0-405085-09/10/77-9-	19-		-	-	-	-	-	-	11-3-7-4-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.19
56-44.4647-104.1922-2-15-						0-405087-09/10/77-10-	19-		-	-	-	-	-	-	16-3-7-5-6-	-1-	-2-1-3-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.22
56-44.4233-104.2372-2-15-						0-405088-09/10/77-11-	19-		-	-	-	-	-	-	11-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.18
56-44.3544-104.1836-2-15-						0-405092-09/10/77-14-	24-		-	-	-	-	-	-	8-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.09
56-44.3628-104.1733-2-15-						0-405093-09/10/77-15-	26-		-	-	-	-	-	-	11-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.14
56-44.3667-104.1683-2-15-						0-405094-09/10/77-15-	26-		-	-	-	-	-	-	8-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.23
56-44.3972-104.1678-2-15-						0-405095-09/10/77-15-	26-		-	-	-	-	-	-	13-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.99
56-44.3053-104.2106-2-15-						0-405097-09/10/77-16-	20-		-	-	-	-	-	-	8-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.79
56-44.2783-104.2486-2-15-						0-405099-09/10/77-18-	20-		-	-	-	-	-	-	8-3-7-5-6-	-1-	-2-1-4-4-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.44
56-44.7344-104.5206-2-15-						0-405100-09/24/77-11-	27-		-	-	-	-	-	-	1-1-4-4-6-	-1-	-2-4-4-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.09
56-44.7375-104.5169-2-12-						0-405101-08/24/77-12-	27-24.0-		7.4-	2375-					2-1-4-3-6-2-2-2-2-4-3-1-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.19
56-44.7111-104.5961-2-15-						0-405102-08/24/77-14-	27-		-	-	-	-	-	-	3-1-6-4-6-	-1-	-2-3-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.34
56-44.6903-104.5628-2-12-						0-405103-08/24/77-15-	31-24.0-		6.8-	2225-					5-1-6-3-6-1-2-4-2-3-3-1-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.09
56-44.7339-104.5703-2-12-						0-405104-08/24/77-17-	31-23.0-		7.3-	2500-					3-1-4-6-6-2-2-3-2-3-3-1-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.31
56-44.6872-104.6269-2-15-						0-405105-08/24/77-18-	26-		-	-	-	-	-	-	2-1-1-4-6-	-1-	-2-3-4-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.08
56-44.6817-104.6256-2-15-						0-405106-08/24/77-18-	26-		-	-	-	-	-	-	1-1-4-4-6-	-1-	-2-3-4-2-4-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.17
56-44.7500-104.7308-2-12-						0-405107-08/25/77-11-	27-19.0-		7.6-	1375-					9-1-6-	-1-	-2-5-2-4-4-1-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.68
56-44.6544-104.6231-2-15-						0-405109-08/25/77-12-	31-		-	-	-	-	-	-	1-1-4-4-6-	-1-	-1-3-4-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.45
56-44.6561-104.6869-2-15-						0-405109-08/25/77-14-	31-		-	-	-	-	-	-	18-1-6-3-6-	-1-	-2-3-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.43
56-44.6506-104.7189-2-15-						0-405110-08/25/77-15-	31-		-	-	-	-	-	-	1-1-6-4-6-	-1-	-1-4-4-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.54
56-44.6458-104.7211-2-15-						0-405111-08/25/77-15-	31-		-	-	-	-	-	-	6-1-6-4-6-	-1-	-2-4-4-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.05
56-44.6192-104.6822-2-15-						0-405112-08/25/77-17-	27-		-	-	-	-	-	-	12-1-4-4-4-	-1-	-1-3-3-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.15
56-44.6064-104.6822-2-15-						0-405113-08/25/77-17-	26-		-	-	-	-	-	-	11-1-4-4-4-	-1-	-1-2-3-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.96
56-44.6122-104.6519-2-99-						0-405114-08/25/77-18-	25-		-	-	-	-	-	-	10-1-4-4-4-	-1-	-1-2-3-4-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.73
56-44.5628-104.6467-2-15-						0-405115-08/27/77-13-	18-		-	-	-	-	-	-	26-1-4-4-6-	-1-	-1-4-4-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.25
56-44.5556-104.6231-2-12-						0-405116-08/27/77-	18-15.0-		6.8-	925-					18-1-4-4-6-3-2-1-2-3-4-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.77
56-44.5519-104.6122-2-15-						0-405117-08/27/77-15-	22-		-	-	-	-	-	-	19-1-6-4-6-	-1-	-1-3-4-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.70
56-44.5442-104.5886-2-15-						0-405118-08/27/77-16-	24-		-	-	-	-	-	-	11-1-4-4-6-	-1-	-2-3-4-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.57
56-44.5522-104.5856-2-12-						0-405119-08/27/77-16-	25-13.0-		6.6-	790-					10-1-4-5-6-2-2-1-1-4-4-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.76
56-44.5356-104.5753-2-12-						0-405120-08/27/77-17-	17-13.5-		6.5-	900-					9-1-6-4-6-2-2-1-2-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.72
56-44.5347-104.5678-2-12-						0-405121-08/27/77-18-	14-13.0-		6.4-	700-					11-1-4-5-6-3-2-1-2-4-4-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.92
56-44.5772-104.6886-2-15-						0-405122-08/28/77-10-	19-		-	-	-	-	-	-																				

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

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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	
56-44.4756-104.0422-2-15-	0-W05074	-5	-5	-5	15	-20	-15	-5	-10	-15	1	13						
56-44.4483-104.0714-2-15-	0-W05075	-5	-5	-5	12	-20	-15	6	-10	-15	1	18						
56-44.4136-104.0958-2-12-	0-W05076	-5	-5	-5	107	-20	26	12	101	-15	4	107						
56-44.4317-104.0775-2-15-	0-W05077	-5	-5	-5	-10	-20	-15	7	-10	-15	1	24						
56-44.3933-104.0742-2-12-	0-W05078	-5	-5	-5	123	-20	21	8	102	-15	5	146						
46-44.3786-104.0469-2-15-	0-W05079	-5	-5	-5	26	-20	-15	9	-10	-15	2	90						
46-44.3806-104.0139-2-15-	0-W05080	-5	-5	-5	30	-20	20	7	-10	-15	3	29						
46-44.4175-104.0381-2-12-	0-W05081	-5	-5	-5	-10	28	-15	8	-10	-15	3	41						
46-44.4775-104.0322-2-15-	0-W05082	-5	-5	-5	12	-20	-15	-5	-10	-15	1	23						
46-44.4925-104.0314-2-15-	0-W05083	-5	-5	-5	21	-20	-15	11	-10	-15	2	27						
56-44.4931-104.2389-2-15-	0-W05084	-5	-5	-5	24	-20	21	-5	-10	-15	2	80						
56-44.4936-104.1631-2-15-	0-W05085	-5	-5	-5	23	-20	-15	6	-10	-15	2	38						
56-44.4647-104.1922-2-15-	0-W05087	-5	-5	-5	15	-20	-15	-5	-10	-15	1	26						
56-44.4233-104.2372-2-15-	0-W05088	-5	-5	-5	19	-20	-15	10	-10	-15	1	37						
56-44.3544-104.1836-2-15-	0-W05089	-5	-5	-5	23	-20	-15	6	-10	-15	1	20						
56-44.3628-104.1733-2-15-	0-W05092	-5	-5	-5	22	-20	-15	7	-10	-15	1	18						
56-44.3667-104.1683-2-15-	0-W05094	-5	-5	-5	16	-20	-15	-5	-10	-15	1	24						
56-44.3972-104.1678-2-15-	0-W05095	-5	-5	-5	18	-20	-15	-5	-10	-15	1	18						
56-44.3053-104.2106-2-15-	0-W05097	-5	-5	-5	15	-20	-15	7	-10	-15	1	23						
56-44.2783-104.2486-2-15-	0-W05099	-5	-5	-5	18	-20	-15	-5	-10	-15	2	21						
56-44.7344-104.5206-2-15-	0-W05100	-5	-5	-5	19	-20	-15	-5	-10	-15	-1	19						
56-44.7375-104.5169-2-12-	0-W05101	-5	-5	-5	17	-20	-15	5	-10	-15	2	68						
56-44.7111-104.5861-2-15-	0-W05102	-5	-5	-5	16	-20	-15	5	-10	-15	2	27						
56-44.6903-104.5628-2-12-	0-W05103	-5	-5	-5	24	-20	-15	-5	-10	-15	1	46						
56-44.7339-104.5703-2-12-	0-W05104	-5	-5	-5	21	-20	-15	7	-10	-15	2	76						
56-44.6872-104.6269-2-15-	0-W05105	-5	-5	-5	18	-20	-15	-5	-10	-15	1	32						
56-44.6817-104.6256-2-15-	0-W05106	-5	-5	-5	20	-20	-15	6	-10	-15	2	65						
56-44.7500-104.7308-2-12-	0-W05107	-5	-5	-5	14	-20	-15	6	-10	-15	2	27						
56-44.6544-104.6231-2-15-	0-W05108	-5	-5	-5	18	-20	-15	11	-10	-15	2	36						
56-44.6561-104.6869-2-15-	0-W05109	-5	-5	-5	24	-20	-15	8	-10	-15	2	43						
56-44.6506-104.7189-2-15-	0-W05110	-5	-5	-5	13	-20	-15	8	-10	-15	1	22						
56-44.6458-104.7211-2-15-	0-W05111	-5	-5	-5	15	-20	-15	5	-10	-15	2	28						
56-44.6192-104.6822-2-15-	0-W05112	-5	-5	-5	18	-20	-15	8	-10	-15	2	49						
56-44.6064-104.6822-2-15-	0-W05113	-5	-5	-5	24	-20	-15	11	-10	-15	2	55						
56-44.6122-104.6519-2-99-	0-W05114	-5	-5	-5	12	-20	-15	5	-10	-15	2	46						
56-44.5628-104.6467-2-15-	0-W05115	-5	-5	-5	23	-20	-15	6	-10	-15	2	37						
56-44.5556-104.6231-2-12-	0-W05116	-5	-5	-5	11	-20	-15	-5	-10	-15	1	15						
56-44.5519-104.6122-2-15-	0-W05117	-5	-5	-5	20	-20	-15	5	-10	-15	2	20						
56-44.5442-104.5886-2-15-	0-W05118	-5	-5	-5	14	-20	-15	-5	-10	-15	1	19						
56-44.5522-104.5856-2-12-	0-W05119	-5	-5	-5	24	-20	-15	6	-10	-15	1	13						
56-44.5356-104.5753-2-12-	0-W05120	-5	-5	-5	15	-20	-15	5	-10	-15	1	14						
56-44.5347-104.5678-2-12-	0-W05121	-5	-5	-5	20	-20	-15	-5	-10	-15	1	23						
56-44.5772-104.6886-2-15-	0-W05122	-5	-5	-5	14	-20	-15	11	-10	-15	2	27						
56-44.5731-104.7100-2-15-	0-W05123	-5	-5	-5	25	-20	-15	-5	-10	-15	2	20						
56-44.5550-104.7169-2-15-	0-W05124	-5	-5	-5	12	-20	16	10	-10	-15	2	38						
56-44.5603-104.7147-2-15-	0-W05125	-5	-5	-5	-10	-20	-15	-5	-10	-15	2	22						
56-44.5125-104.6794-2-12-	0-W05126	-5	-5	-5	10	-20	-15	-5	-10	17	1	20						
56-44.5056-104.6681-2-12-	0-W05127	-5	-5	-5	20	-20	-15	-5	-10	-15	-1	19						
56-44.5367-104.5617-2-11-	0-W05128	-5	-5	-5	11	-20	-15	-5	-10	-15	-1	20						
56-44.5289-104.5319-2-12-	0-W05129	-5	-5	-5	19	-20	-15	12	-10	-15	1	35						
56-44.5833-104.5158-2-12-	0-W05130	-5	-5	-5	15	-20	-15	-5	-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	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
56-44.4756-104.0622-2-15-	0-405074	27990	-0.05	361	9083	24	-40	3.3	31	1.9	2	0.5	6323	6.0	10490	18	0.2					
56-44.4483-104.0714-2-15-	0-405075	35993	-0.06	476	3837	36	-61	5.7	42	1.9	3	0.7	6273	10.4	12250	22	0.3					
56-44.4136-104.0958-2-12-	0-405076	52890	-0.14	-186	37720	105	-120	31.6	62	4.9	3	2.2	65020	4.9	13120	63	0.3					
56-44.4317-104.0775-2-15-	0-405077	36560	-0.05	474	8962	38	-52	9.2	25	1.7	3	0.7	6947	6.5	13460	21	0.2					
56-44.3933-104.0742-2-12-	0-405078	54570	-0.10	-193	47430	117	-120	21.0	42	3.6	5	2.5	52640	7.0	9967	66	0.3					
46-44.3786-104.0469-2-15-	0-405079	58370	-0.09	736	7510	60	-116	9.1	60	5.0	3	0.9	14850	6.9	17480	25	0.4					
46-44.3806-104.0139-2-15-	0-405080	64960	-0.11	467	11710	88	-96	11.3	59	7.7	5	1.8	19130	8.7	16820	69	0.4					
46-44.4175-104.0381-2-12-	0-405081	64060	-0.06	686	15220	122	-112	9.7	21	1.5	4	1.4	17910	13.0	22580	76	0.3					
46-44.4775-104.0322-2-15-	0-405082	34020	-0.05	391	36880	49	-49	4.1	41	1.6	3	0.7	8435	9.5	11930	22	0.3					
46-44.4925-104.0314-2-15-	0-405083	49110	-0.08	511	19400	56	-75	8.1	48	2.6	4	0.8	12180	7.1	13320	26	0.3					
56-44.4931-104.2389-2-15-	0-405084	53690	-0.10	371	35970	49	77	13.0	57	-1.9	4	0.9	16910	6.2	21790	28	0.4					
56-44.4936-104.1631-2-19-	0-405085	48990	-0.06	573	11400	37	-63	10.3	42	2.4	4	0.6	10140	4.9	19540	25	0.3					
56-44.4647-104.1922-2-15-	0-405087	31300	-0.05	385	44550	35	-47	3.7	42	1.8	3	0.8	8047	11.3	13290	22	0.3					
56-44.4233-104.2372-2-15-	0-405088	42330	-0.06	413	37980	42	-61	6.0	42	2.2	3	0.8	9766	7.6	16180	29	0.2					
56-44.3544-104.1836-2-15-	0-405089	37290	-0.09	354	6122	35	-58	11.2	40	2.3	2	0.6	10280	7.3	12810	17	0.3					
56-44.3628-104.1733-2-15-	0-405093	34730	-0.05	507	7892	36	-54	10.3	33	1.8	3	0.5	6932	6.7	11910	20	0.2					
56-44.3667-104.1683-2-15-	0-405094	37220	-0.06	467	25760	40	-55	4.3	43	2.3	3	0.6	8768	6.9	13980	21	0.3					
56-44.3972-104.1678-2-15-	0-405095	27330	-0.05	318	31250	25	-46	5.0	32	-0.9	2	0.5	5765	11.4	9197	10	0.3					
56-44.3053-104.2106-2-15-	0-405097	37760	-0.07	291	9440	38	-51	8.1	35	2.3	2	0.7	9392	8.3	13030	28	0.2					
56-44.2783-104.2486-2-15-	0-405099	36290	-0.05	391	7249	38	-63	9.4	29	2.0	2	0.6	7097	5.6	13380	25	0.2					
56-44.7344-104.5206-2-15-	0-405100	31550	-0.05	296	3280	54	-35	4.2	38	-1.0	4	0.8	7538	14.2	9555	29	0.4					
56-44.7375-104.5169-2-12-	0-405101	42460	-0.07	280	77030	40	-82	7.1	27	1.9	3	0.8	11040	5.1	18510	18	0.3					
56-44.7111-104.5861-2-15-	0-405102	39240	-0.07	300	28870	28	-48	7.9	24	-1.2	2	0.7	8873	5.7	17110	21	0.2					
56-44.6903-104.5628-2-12-	0-405103	40600	-0.06	384	37570	33	-60	9.5	32	1.6	3	0.7	8672	7.8	18360	21	0.4					
56-44.7339-104.5703-2-12-	0-405104	49910	-0.08	525	52930	46	-77	7.7	48	3.4	4	0.9	15810	7.0	19270	30	0.4					
56-44.6872-104.6269-2-15-	0-405105	36910	-0.06	401	47660	34	203	5.3	35	1.6	3	0.8	7639	10.2	18030	21	0.3					
56-44.6817-104.6256-2-15-	0-405106	42810	-0.09	980	60340	43	-64	11.2	33	-1.7	3	0.9	13040	6.5	20080	30	0.2					
56-44.7500-104.7308-2-12-	0-405107	32870	-0.06	406	3584	45	-44	12.0	32	1.7	4	0.7	9841	10.0	8696	30	0.4					
56-44.6544-104.6231-2-15-	0-405108	38070	-0.07	267	25360	35	-46	5.0	29	2.1	3	0.7	9830	5.7	18530	17	0.2					
56-44.6561-104.6869-2-15-	0-405109	39760	-0.06	412	25190	45	-52	7.3	29	1.7	3	0.8	10310	6.1	12440	24	0.3					
56-44.6506-104.7189-2-15-	0-405110	28010	-0.14	375	19780	29	-32	4.1	22	1.8	3	0.8	8812	6.2	16580	-35	0.2					
56-44.6458-104.7211-2-15-	0-405111	39730	-0.27	563	13260	51	-51	5.9	35	3.4	3	1.1	13450	8.6	15550	94	0.7					
56-44.6192-104.6822-2-15-	0-405112	42120	-0.28	336	33350	39	-69	6.7	42	2.8	3	1.3	17650	11.6	21420	-50	0.3					
56-44.6064-104.6822-2-15-	0-405113	48300	-0.21	443	32440	43	-67	7.6	45	3.7	3	1.2	19610	5.6	23010	-30	0.3					
56-44.6122-104.6519-2-99-	0-405114	40390	-0.17	357	45160	38	-52	7.2	31	2.4	3	1.0	15310	7.7	21330	25	0.4					
56-44.5628-104.6467-2-15-	0-405115	47100	-0.28	425	33070	39	-75	6.4	36	3.8	4	1.3	16390	6.9	17650	-55	0.6					
56-44.5556-104.6231-2-12-	0-405116	29650	-0.24	426	56010	31	-50	4.1	26	-1.7	2	0.9	7146	10.7	13060	-47	0.6					
56-44.5519-104.6122-2-15-	0-405117	40060	-0.17	388	22570	36	-55	6.8	28	2.9	3	0.9	11600	7.2	15730	-29	0.3					
56-44.5442-104.5886-2-15-	0-405118	29320	-0.16	409	24770	33	-45	5.5	23	-1.2	2	1.0	9579	8.5	13410	-41	0.2					
56-44.5522-104.5856-2-12-	0-405119	29760	-0.20	275	31720	29	-46	2.8	29	-1.5	3	0.8	6218	10.4	15660	-47	0.3					
56-44.5355-104.5753-2-12-	0-405120	28360	-0.24	534	21700	30	-44	5.5	22	-1.8	2	1.0	8283	12.5	13470	-42	-0.2					
56-44.5347-104.5678-2-12-	0-405121	31970	-0.15	562	49850	36	-49	3.6	29	2.3	3	0.9	10330	8.2	15280	-22	0.2					
56-44.5772-104.6886-2-15-	0-405122	40560	-0.17	361	24720	40	-58	6.0	35	2.3	3	1.0	12720	7.5	18530	-40	0.2					
56-44.5731-104.7100-2-15-	0-405123	46370	-0.25	459	24140	45	-68	7.3	40	3.9	3	1.1	13960	6.6	17110	-52	0.3					
56-44.5550-104.7169-2-15-	0-405124	51540	-0.28	313	36430	40	-74	9.2	45	3.3	3	1.3	20260	8.1	18580	-50	0.4					
56-44.5603-104.7147-2-15-	0-405125	39160	-0.04	329	20690	35	-49	3.2	35	2.4	2	0.9	11870	6.7	18940	14	0.2					
56-44.5125-104.6794-2-12-	0-405126	32860	-0.04	471	26520	31	-48	3.7	26	1.5	3	0.9	9968	8.8	17610	17	0.3					
56-44.5056-104.6681-2-12-	0-405127	34660	-0.04	426	32720	36	-48	4.4	37	2.1	3	1.0	11800	9.1	17240	18	0.3					
56-44.5367-104.5617-2-11-	0-405128	35260	-0.05	284	54930	32	-42	3.3	31	1.9	3	1.1	9618	7.9	20570	14	0.2					
56-44.5289-104.5319-2-12-	0-405129	41490	-0.06	493	63770	59	-60	5.8	47	2.6	3	1.3	19050	9.3	22180	30	0.3					
56-44.5833-104.5158-2-12-	0-405130	33090	-0.04	505	24370	33	-39	4.2	37	1.8	3	1.0	11450	10.2	18150	20	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	
56-44.4756-104.0622-2-15-	0-4050774	5509	211	2868	34	-2	3.2	1.8	-175	-1	-1	4.0	1822	30	1.4	43	0.380				
56-44.4483-104.0714-2-15-	0-4050775	4964	333	4993	-16	-2	3.0	2.5	-258	-1	-1	5.4	3211	32	1.8	-23	0.389				
56-44.4136-104.0958-2-12-	0-4050776	25840	1532	12470	-42	-5	22.0	10.4	-461	7	-1	8.8	6698	342	-3.1	163	0.372				
56-44.4317-104.0775-2-15-	0-4050777	9784	277	5716	32	-2	3.4	2.5	-210	-1	-1	4.8	2737	45	1.4	-13	0.425				
56-44.3933-104.0742-2-12-	0-4050778	31670	1612	15080	-29	-3	22.7	12.0	723	5	-1	10.2	7262	290	4.4	123	0.367				
46-44.3786-104.0469-2-15-	0-4050779	9781	969	11590	5	-3	6.8	3.3	-472	-1	-1	7.6	4441	61	2.9	-69	0.341				
46-44.3806-104.0139-2-15-	0-4050780	8487	1005	9637	59	-3	8.9	8.8	-383	-1	-1	11.9	2907	66	3.5	-84	0.552				
46-44.4175-104.0381-2-12-	0-4050781	-4482	813	23000	31	-2	3.0	6.9	811	-1	-1	15.8	3520	53	4.7	57	0.421				
46-44.4775-104.0322-2-15-	0-4050782	6036	259	4016	31	-2	4.1	3.0	-194	-1	-1	5.9	2384	40	3.0	-17	0.353				
46-44.4925-104.0314-2-15-	0-4050783	11240	614	5250	-22	-2	5.3	4.6	-367	-1	-1	8.1	2784	58	-2.1	-62	0.294				
56-44.4931-104.2389-2-15-	0-4050784	51690	490	7140	-27	-3	8.9	5.0	-283	-1	-1	8.3	3064	60	3.0	50	0.311				
56-44.4936-104.1631-2-15-	0-4050785	10170	370	7427	44	-2	5.0	2.8	-242	-1	-1	7.3	3411	56	2.5	40	0.300				
56-44.4647-104.1922-2-15-	0-4050787	12360	268	3479	28	-2	4.3	2.8	-185	-1	-1	6.2	2184	33	2.0	-34	0.358				
56-44.4233-104.2372-2-15-	0-4050788	14510	339	4994	35	-2	4.9	3.5	-250	-1	-1	7.5	3067	39	2.5	60	0.291				
56-44.3544-104.1836-2-15-	0-4050789	7781	440	3354	51	-3	5.0	2.4	-262	-1	-1	5.8	2263	51	2.3	-45	0.360				
56-44.3628-104.1733-2-15-	0-4050793	6545	381	4448	26	-2	3.5	2.1	-243	-1	-1	4.8	2539	37	1.4	59	0.446				
56-44.3667-104.1683-2-15-	0-4050794	13160	266	5237	34	-2	4.3	2.7	-204	-1	-1	6.1	2306	59	1.7	42	0.366				
56-44.3972-104.1678-2-15-	0-4050795	9345	261	2438	-15	-2	2.7	2.4	-209	-1	-1	3.5	2067	31	1.7	21	0.569				
56-44.3053-104.2106-2-15-	0-4050797	8221	330	4726	41	-2	4.7	2.5	-196	-1	-1	5.7	2220	45	-1.3	-27	0.314				
56-44.2783-104.2486-2-15-	0-4050799	6795	480	6303	33	-2	3.0	3.1	-272	-1	-1	5.9	2034	40	2.1	-38	0.583				
56-44.7344-104.5206-2-15-	0-4051000	5064	192	2185	-14	-2	5.0	4.1	-158	-1	-1	7.9	3549	49	3.5	48	0.391				
56-44.7375-104.5169-2-12-	0-4051001	44530	509	7050	-18	-2	5.4	3.2	-328	-1	-1	4.9	2899	47	3.1	34	0.447				
56-44.7111-104.5861-2-15-	0-4051002	14270	295	3273	-20	-2	4.9	2.4	-189	-1	-1	4.4	1682	31	-1.4	-31	0.305				
56-44.6903-104.5628-2-12-	0-4051003	28670	361	5996	33	-2	4.8	2.5	-241	-1	-1	4.8	2684	45	1.8	92	0.435				
56-44.7339-104.5703-2-12-	0-4051004	47100	484	7667	30	-2	7.8	4.3	-303	-1	-1	7.0	3090	63	2.9	66	0.330				
56-44.6872-104.6269-2-15-	0-4051005	28780	312	6538	-16	-2	4.1	4.1	-256	-1	-1	4.9	2786	39	-1.4	-12	0.629				
56-44.6817-104.6256-2-15-	0-4051006	49830	503	3408	-26	-3	5.6	2.7	478	-1	-1	5.8	2264	51	-2.0	-79	0.374				
56-44.7500-104.7308-2-12-	0-4051007	5245	707	1328	-16	-2	4.7	3.5	-297	-1	-1	6.7	3998	58	2.7	-23	0.848				
56-44.6544-104.6231-2-15-	0-4051008	23750	393	1757	-19	-2	5.5	2.9	-246	-1	-1	5.2	2605	39	2.3	30	0.279				
56-44.6561-104.6869-2-15-	0-4051009	28500	453	2699	-17	-2	4.9	4.0	-274	-1	-1	5.5	2389	50	2.8	20	0.442				
56-44.6506-104.7189-2-15-	0-4051010	8486	258	1210	-30	-3	3.7	2.6	-170	-1	-1	4.6	1744	25	-2.1	74	0.335				
56-44.6458-104.7211-2-15-	0-4051011	9941	346	2059	-49	-6	5.8	3.4	-267	-2	-1	6.6	3092	45	-3.7	-61	0.311				
56-44.6192-104.6822-2-15-	0-4051012	31130	340	7876	-46	-7	7.0	4.3	-232	-1	-1	7.6	3093	47	5.9	-50	0.283				
56-44.6064-104.6822-2-15-	0-4051013	32730	459	6256	65	-5	7.3	3.8	-282	-1	-1	6.9	3149	54	-3.5	51	0.284				
56-44.6122-104.6519-2-99-	0-4051014	29430	399	3824	64	-4	6.0	3.4	-224	-1	-1	5.4	2369	45	-2.2	80	0.320				
56-44.5628-104.6467-2-15-	0-4051015	27360	435	5265	-49	-7	6.7	-3.3	462	-2	-1	7.0	2828	53	-3.8	49	0.321				
56-44.5556-104.6231-2-12-	0-4051016	11200	198	3163	-39	-6	3.8	-3.1	395	-2	-1	4.1	1817	28	-3.3	-46	0.432				
56-44.5519-104.6122-2-15-	0-4051017	14050	346	4097	64	-4	4.5	3.2	-234	-1	-1	5.0	2459	37	-2.4	72	0.340				
56-44.5442-104.5886-2-15-	0-4051018	9866	336	2584	-32	-4	3.8	-2.0	-207	-1	-1	4.3	1953	26	3.4	-41	0.365				
56-44.5522-104.5856-2-12-	0-4051019	8509	146	2620	-39	-5	3.1	-2.5	275	-1	-1	4.3	2020	22	-3.2	69	0.409				
56-44.5356-104.5753-2-12-	0-4051020	7395	201	2433	-38	-5	3.8	-3.0	-172	-1	-1	4.6	1885	26	-3.8	-29	0.374				
56-44.5347-104.5678-2-12-	0-4051021	11550	225	3205	-25	-4	3.9	4.0	339	-1	-1	5.4	2188	36	4.3	-38	0.356				
56-44.5772-104.6886-2-15-	0-4051022	19600	358	6049	-33	-4	5.2	3.1	-228	-1	-1	5.3	2237	38	4.2	-41	0.308				
56-44.5731-104.7100-2-15-	0-4051023	18290	422	5202	-43	-6	5.8	-2.9	-295	-2	-1	5.9	2636	49	-3.8	42	0.320				
56-44.5550-104.7169-2-15-	0-4051024	33110	408	8388	-44	-7	7.8	-3.5	375	-2	-1	6.9	2383	51	-4.4	-62	0.307				
56-44.5603-104.7147-2-15-	0-4051025	14690	286	5466	54	-1	4.5	2.6	-173	-1	-1	4.2	2145	36	1.5	54	0.350				
56-44.5125-104.6794-2-12-	0-4051026	12050	219	4937	33	-1	3.6	2.9	-160	-1	-1	4.0	2063	30	1.5	47	0.423				
56-44.5056-104.6681-2-12-	0-4051027	13070	342	3430	44	-1	4.3	3.0	-180	-1	-1	5.0	2396	31	2.1	28	0.348				
56-44.5367-104.5617-2-11-	0-4051028	10740	253	876	50	-1	3.9	2.9	383	-1	-1	4.5	2341	42	-1.2	-29	0.369				
56-44.5289-104.5319-2-12-	0-4051029	18400	424	4867	-24	-1	6.1	4.7	-219	-1	-1	7.8	2985	57	1.6	69	0.283				
56-44.5833-104.5158-2-12-	0-4051030	10820	229	2746	-17	-1	4.1	2.8	-154	-1	-1	5.3	2336	35	2.4	31	0.353				

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)	SCINTILLATOR (cLi/gpm)	ROCK TYPE	ROCK COLOR	ROCK TYPE	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																												
56-44.6267-104.5247-2-12-	0-W05131-08/29/77-12-	21-14.0-	-	7.3-	1500-	18-1-4-5-6-	2-2-4-2-3-4-2-2-	3-	-	-	-	-	1.69																							
56-44.6342-104.5139-2-15-	0-W05132-08/29/77-13-	20-	-	-	-	16-1-1-5-6-	-1-	2-3-4-3-2-	3-	-	-	-	1.38																							
56-44.6722-104.5119-2-12-	0-W05133-08/29/77-16-	26-15.0-	-	7.4-	1975-	12-1-4-3-6-2-2-1-2-2-3-3-3-	3-	-	-	-	-	1.43																								
56-44.6625-104.5153-2-12-	0-W05134-08/29/77-16-	25-15.0-	-	7.6-	1875-	6-1-4-3-6-2-2-4-2-3-4-3-2-	3-	-	-	-	-	1.91																								
56-44.6333-104.5736-2-15-	0-W05135-08/29/77-17-	24-	-	-	-	51-1-4-5-6-	-1-	1-4-4-3-2-	3-	-	-	-	1.58																							
56-44.6183-104.6072-2-15-	0-W05136-08/29/77-17-	20-	-	-	-	9-1-1-5-6-	-1-	2-3-3-2-3-	3-	-	-	-	1.47																							
56-44.6067-104.6103-2-15-	0-W05137-08/29/77-18-	20-	-	-	-	5-1-4-5-6-	-1-	2-2-3-2-2-	3-	-	-	-	1.34																							
56-44.5889-104.5936-2-15-	0-W05138-08/29/77-18-	19-	-	-	-	9-1-4-5-6-	-1-	2-4-4-3-2-	3-	-	-	-	1.68																							
56-44.5750-104.5506-2-15-	0-W05139-08/30/77-13-	20-	-	-	-	5-1-1-5-6-	-1-	2-4-4-3-2-	3-	-	-	-	2.36																							
56-44.6814-104.7036-2-15-	0-W05140-08/30/77-18-	16-	-	-	-	3-1-1-5-6-	-1-	2-3-3-2-2-	3-	-	-	-	2.99																							
56-44.6936-104.7000-2-15-	0-W05141-08/30/77-19-	16-	-	-	-	20-1-1-3-6-	-1-	2-3-3-2-2-	3-	-	-	-	3.68																							
56-44.2431-104.9797-2-15-	0-W05142-09/01/77-14-	24-	-	-	-	11-1-1-5-6-	-1-	2-3-3-2-2-	3-	-	-	-	2.98																							
56-44.3267-104.8542-2-15-	0-W05143-09/06/77-11-	30-	-	-	-	0-1-1-5-6-	-1-	2-3-3-1-1-	3-	-	-	-	2.97																							
56-44.2142-104.9711-2-15-	0-W05144-09/01/77-14-	24-	-	-	-	9-1-1-5-6-	-1-	2-3-3-1-2-	3-	-	-	-	2.72																							
56-44.2742-104.8522-2-15-	0-W05145-09/06/77-12-	30-	-	-	-	9-1-1-5-6-	-1-	2-3-3-1-1-	3-	-	-	-	3.56																							
56-44.2806-104.8208-2-12-	0-W05146-09/06/77-13-	30-25.0-	-	5.6-	130-	24-1-1-6-8-1-2-5-2-3-3-1-1-	3-	-	-	-	-	3.97																								
56-44.3117-104.8319-2-15-	0-W05148-09/06/77-15-	30-	-	-	-	19-1-1-5-6-	-1-	1-3-3-1-2-	3-	-	-	-	6.05																							
56-44.3131-104.7764-2-12-	0-W05149-09/06/77-16-	30-	-	-	-	9-1-1-5-6-1-2-4-2-3-3-1-2-	3-	-	-	-	-	6.24																								
56-44.3386-104.7881-2-15-	0-W05150-09/06/77-16-	29-	-	-	-	11-1-1-5-6-	-1-	2-3-3-1-2-	3-	-	-	-	3.01																							
56-44.3547-104.8306-2-15-	0-W05151-09/06/77-17-	28-	-	-	-	11-1-1-5-6-	-1-	2-3-3-1-2-	3-	-	-	-	4.52																							
56-44.3239-104.9167-2-15-	0-W05152-09/06/77-18-	26-	-	-	-	13-1-1-5-6-	-1-	2-3-3-1-2-	3-	-	-	-	3.04																							
56-44.3661-104.8972-2-15-	0-W05156-09/07/77-10-	26-	-	-	-	35-1-1-5-6-	-1-	1-3-3-1-1-	3-	-	-	-	3.59																							
56-44.3903-104.8944-2-15-	0-W05157-09/07/77-10-	26-	-	-	-	9-1-1-4-6-	-1-	1-3-3-1-1-	3-	-	-	-	2.77																							
56-44.3986-104.8800-2-15-	0-W05158-09/07/77-11-	26-	-	-	-	27-1-1-5-6-	-1-	1-3-3-2-1-	3-	-	-	-	3.45																							
56-44.4258-104.8764-2-14-	0-W05159-09/07/77-12-	26-15.0-	-	8.5-	2275-	9-1-1-6-8-	-2-2-	5-3-1-1-	3-	-	-	-	5.26																							
56-44.4328-104.8994-2-15-	0-W05160-09/07/77-13-	30-	-	-	-	60-1-1-5-6-	-1-	2-3-3-1-1-	3-	-	-	-	5.17																							
56-44.3642-104.9619-2-15-	0-W05162-09/07/77-15-	29-	-	-	-	2-1-1-5-6-	-1-	1-3-3-3-2-	3-	-	-	-	3.05																							
56-44.4233-104.9819-2-15-	0-W05164-09/07/77-17-	30-	-	-	-	16-1-1-5-6-	-1-	2-3-3-2-2-	3-	-	-	-	6.14																							
56-44.4592-104.9986-2-15-	0-W05165-09/07/77-18-	27-	-	-	-	14-1-1-5-6-	-1-	2-3-3-2-2-	3-	-	-	-	4.56																							
56-44.5000-104.9714-2-15-	0-W05165-09/07/77-19-	26-	-	-	-	27-1-1-5-6-	-1-	2-3-3-1-2-	3-	-	-	-	4.46																							
56-44.4367-104.8139-2-15-	0-W05167-09/08/77-15-	20-	-	-	-	3-1-1-5-6-	-1-	1-4-4-3-3-	3-	-	-	-	3.10																							
56-44.4844-104.8056-2-15-	0-W05169-09/08/77-16-	20-	-	-	-	48-1-1-5-6-	-1-	2-2-3-2-2-	3-	-	-	-	2.91																							
56-44.4864-104.7897-2-15-	0-W05170-09/08/77-16-	20-	-	-	-	4-1-1-6-8-	-1-	2-3-3-2-2-	3-	-	-	-	4.56																							
56-44.4994-104.7861-2-15-	0-W05171-09/08/77-17-	20-	-	-	-	11-1-1-5-6-	-1-	1-3-3-2-2-	3-	-	-	-	2.52																							
56-44.4917-104.7775-2-15-	0-W05172-09/08/77-17-	20-	-	-	-	9-1-1-5-6-	-1-	1-3-3-3-2-	3-	-	-	-	2.41																							
56-44.4436-104.7681-2-15-	0-W05173-09/08/77-17-	20-	-	-	-	6-1-1-5-6-	-1-	2-3-3-3-2-	3-	-	-	-	4.70																							
56-44.4169-104.7869-2-15-	0-W05174-09/08/77-19-	20-	-	-	-	5-1-1-5-6-	-1-	2-4-3-2-2-	3-	-	-	-	3.38																							
56-44.4283-104.9292-2-15-	0-W05177-09/09/77-10-	22-	-	-	-	13-1-1-5-6-	-1-	1-3-3-2-1-	3-	-	-	-	2.90																							
56-44.4967-104.9200-2-15-	0-W05178-09/09/77-11-	24-	-	-	-	9-1-1-5-6-	-1-	2-3-4-2-1-	3-	-	-	-	3.52																							
56-44.4417-104.8897-2-15-	0-W05180-09/09/77-13-	27-	-	-	-	9-1-1-5-6-	-1-	2-3-3-2-1-	3-	-	-	-	4.67																							
56-44.4689-104.8808-2-15-	0-W05181-09/09/77-13-	29-	-	-	-	9-1-7-5-6-	-1-	2-1-3-4-1-	3-	-	-	-	6.09																							
56-44.4961-104.8750-2-15-	0-W05182-09/09/77-14-	29-	-	-	-	11-1-1-5-6-	-1-	1-4-3-2-1-	3-	-	-	-	3.76																							
56-44.4008-104.8064-2-15-	0-W05183-09/09/77-15-	28-	-	-	-	25-1-1-5-6-	-1-	2-3-4-1-1-	3-	-	-	-	3.99																							
56-44.2592-104.7836-2-15-	0-W05184-09/09/77-17-	27-	-	-	-	4-1-1-3-6-	-1-	2-3-3-1-1-	3-	-	-	-	5.34																							
56-44.2078-104.8303-2-15-	0-W05186-09/10/77-15-	29-	-	-	-	18-1-1-5-6-	-1-	1-3-3-1-1-	3-	-	-	-	2.63																							
56-44.2417-104.7986-2-15-	0-W05187-09/10/77-15-	29-	-	-	-	26-1-1-5-6-	-1-	1-3-3-1-1-	3-	-	-	-	4.02																							
56-44.2081-104.8036-2-15-	0-W05188-09/10/77-16-	29-	-	-	-	16-1-1-5-6-	-1-	2-3-3-1-1-	3-	-	-	-	3.05																							
56-44.2356-104.8367-2-15-	0-W05189-09/10/77-17-	28-	-	-	-	20-1-1-5-6-	-1-	1-3-3-2-1-	3-	-	-	-	4.64																							
56-44.2319-104.7717-2-12-	0-W05190-09/10/77-17-	27-	-	-	-	18-1-1-3-6-1-2-4-2-3-3-2-1-	3-	-	-	-	-	4.98																								
56-44.2119-104.7569-2-15-	0-W05191-09/10/77-19-	25-	-	-	-	9-1-1-5-6-	-1-	2-3-3-2-1-	3-	-	-	-	3.76																							
56-44.1958-104.8425-2-15-	0-W05192-09/10/77-20-	25-	-	-	-	9-1-1-5-6-	-1-	2-3-3-2-1-	3-	-	-	-	2.93																							

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	
56-44.6267-104.5247-2-12-						0-405131	-5	-5	-5	15	-20	-15	-5	-10	-15		1	35
56-44.6342-104.5139-2-15-						0-405132	-5	-5	-5	11	-20	-15	-5	-10	-15		-1	18
56-44.5722-104.5119-2-12-						0-405133	-5	-5	-5	12	-20	-15	-5	-10	-15		-1	20
56-44.6625-104.5153-2-12-						0-405134	-5	-5	-5	13	-20	-15	6	-10	-15		-1	26
56-44.6333-104.5736-2-15-						0-405135	-5	-5	-5	13	-20	-15	-5	-10	-15		1	39
56-44.6183-104.6072-2-15-						0-405136	-5	-5	-5	21	-20	-15	-5	-10	-15		1	22
56-44.6067-104.6103-2-15-						0-405137	-5	-5	-5	17	-20	-15	6	-10	-15		2	21
56-44.5889-104.5936-2-15-						0-405138	-5	-5	-5	11	-20	-15	-5	-10	-15		1	22
56-44.5750-104.5506-2-15-						0-405139	-5	-5	-5	30	-20	-15	-5	-10	-15		2	18
56-44.6814-104.7036-2-15-						0-405140	-5	-5	-5	20	-20	24	-5	-10	-15		1	14
56-44.6936-104.7000-2-15-						0-405141	-5	-5	-5	21	-20	-15	-5	-10	-15		2	20
56-44.2431-104.9797-2-15-						0-405142	-5	-5	-5	20	-20	-15	5	-10	-15		2	30
56-44.3267-104.8542-2-15-						0-405143	-5	-5	-5	24	-20	-15	12	-10	-15		2	24
56-44.2142-104.9711-2-15-						0-405144	-5	-5	-5	19	-20	-15	9	-10	-15		2	27
56-44.2742-104.8522-2-15-						0-405145	-5	-5	-5	39	-20	17	9	-10	-15		2	48
56-44.2806-104.8208-2-12-						0-405146	-5	-5	-5	24	-20	-15	13	-10	-15		2	53
56-44.3117-104.8319-2-15-						0-405148	-5	-5	-5	34	-20	20	13	-10	-15		2	32
56-44.3131-104.7764-2-12-						0-405149	-5	-5	-5	23	-20	27	10	-10	-15		2	42
56-44.3386-104.7881-2-15-						0-405150	-5	-5	-5	21	-20	-15	5	-10	-15		2	28
56-44.3547-104.8306-2-15-						0-405151	-5	-5	-5	30	-20	-15	6	-10	-15		2	35
56-44.3239-104.9167-2-15-						0-405152	-5	-5	-5	30	-20	-15	17	-10	-15		1	40
56-44.3661-104.8972-2-15-						0-405154	-5	-5	-5	29	-20	-15	11	-10	-15		-1	65
56-44.3903-104.8944-2-15-						0-405157	-5	-5	-5	26	-20	21	12	-10	-15		-1	49
56-44.3986-104.8800-2-15-						0-405158	-5	-5	-5	21	-20	-15	24	-10	-15		2	45
56-44.4258-104.8764-2-14-						0-405159	-5	-5	-5	34	-20	27	22	-10	-15		2	49
56-44.4328-104.8994-2-15-						0-405160	-5	-5	-5	33	-20	23	11	-10	-15		3	54
56-44.3642-104.9619-2-15-						0-405162	-5	-5	-5	16	-20	17	10	-10	-15		2	25
56-44.4233-104.9819-2-15-						0-405164	-5	-5	-5	37	-20	-15	16	-10	-15		2	41
56-44.4592-104.9986-2-15-						0-405165	-5	-5	-5	22	-20	-15	9	-10	-15		1	23
56-44.5000-104.9714-2-15-						0-405166	-5	-5	-5	17	-20	-15	8	-10	-15		2	26
56-44.4367-104.8139-2-15-						0-405167	-5	-5	-5	25	-20	-15	12	-10	-15		1	26
56-44.4844-104.8056-2-15-						0-405169	-5	-5	-5	18	-20	-15	13	-10	-15		2	29
56-44.4864-104.7897-2-15-						0-405170	-5	-5	-5	16	-20	-15	8	-10	-15		4	32
56-44.4994-104.7861-2-15-						0-405171	-5	-5	-5	19	-20	-15	7	-10	-15		1	14
56-44.4917-104.7775-2-15-						0-405172	-5	-5	-5	14	-20	-15	-5	-10	-15		-1	15
56-44.4436-104.7681-2-15-						0-405173	-5	-5	-5	22	-20	16	7	-10	-15		2	44
56-44.4169-104.7869-2-15-						0-405174	-5	-5	-5	24	-20	-15	6	-10	-15		2	28
56-44.4283-104.9292-2-15-						0-405177	-5	-5	-5	15	-20	15	11	-10	-15		1	24
56-44.4967-104.9260-2-15-						0-405178	-5	-5	-5	21	-20	20	7	-10	-15		2	41
56-44.4417-104.8897-2-15-						0-405180	-5	-5	-5	27	-20	24	8	-10	-15		3	49
56-44.4689-104.8808-2-15-						0-405181	-5	-5	-5	37	-20	-15	14	-10	-15		1	20
56-44.4961-104.8750-2-15-						0-405182	-5	-5	-5	31	-20	27	16	-10	-15		-1	89
56-44.4008-104.8064-2-15-						0-405183	-5	-5	-5	36	-20	18	5	-10	-15		1	32
56-44.2592-104.7836-2-15-						0-405184	-5	-5	-5	25	-20	29	8	-10	-15		1	32
56-44.2078-104.8303-2-15-						0-405186	-5	-5	-5	21	-20	24	8	-10	-15		2	36
56-44.2417-104.7986-2-15-						0-405187	-5	-5	-5	27	-20	22	-5	-10	-15		2	49
56-44.2081-104.8036-2-15-						0-405188	-5	-5	-5	29	-20	-15	-5	-10	-15		2	30
56-44.2356-104.8367-2-15-						0-405189	-5	-5	-5	29	-20	19	13	-10	-15		2	37
56-44.2319-104.7717-2-12-						0-405190	-5	-5	-5	34	-20	20	12	-10	-15		3	52
56-44.2119-104.7569-2-15-						0-405191	-5	-5	-5	25	-20	25	12	-10	-15		2	48
56-44.1958-104.8425-2-15-						0-405192	-5	-5	-5	30	-20	22	13	-10	-15		3	55

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	
56-44.6267-104.5247-2-12-	0-W05131	39800	-0.05	429	41330	35	-49	5.3	37	2.7	3	0.9	14410	7.4	23730	19	0.2						
56-44.6342-104.5139-2-15-	0-W05132	35430	-0.05	353	37590	28	-58	3.0	29	1.7	3	0.9	8312	5.6	19190	13	0.2						
56-44.6722-104.5119-2-12-	0-W05133	27630	-0.04	518	34630	19	-47	1.6	24	1.4	2	0.9	6965	10.9	17600	11	0.3						
56-44.6625-104.5153-2-12-	0-W05134	35200	-0.05	502	42700	36	-55	4.2	36	2.0	3	0.9	12230	10.9	18790	17	0.3						
56-44.6333-104.5736-2-15-	0-W05135	44890	-0.06	357	24090	39	-49	7.1	45	3.2	3	1.1	17170	5.4	22640	22	0.3						
56-44.6183-104.6072-2-15-	0-W05136	26310	-0.05	257	40190	25	-45	2.0	38	2.1	2	0.6	7286	7.2	13160	14	0.1						
56-44.6067-104.6103-2-15-	0-W05137	37810	-0.05	392	29320	29	-48	2.5	32	-1.2	3	0.9	10630	6.4	20230	18	0.2						
56-44.5889-104.5936-2-15-	0-W05138	30660	-0.04	445	20550	33	-39	4.0	33	1.6	3	0.7	9281	14.3	16720	17	0.3						
56-44.5750-104.5506-2-15-	0-W05139	46620	-0.06	569	21320	48	-53	7.6	51	3.1	4	1.2	19470	8.3	19120	25	0.3						
56-44.6814-104.7036-2-15-	0-W05140	29410	-0.14	783	8681	57	-39	8.9	36	-2.4	3	1.5	17940	13.0	8168	-19	0.3						
56-44.6936-104.7000-2-15-	0-W05141	29160	-0.15	1806	17010	56	-42	8.1	62	-2.7	4	2.5	24430	21.8	9437	29	0.5						
56-44.2431-104.9797-2-15-	0-W05142	43880	-0.08	710	20110	50	-59	10.3	38	2.6	4	1.0	9779	7.2	14160	28	0.3						
56-44.3267-104.8542-2-15-	0-W05143	52070	-0.13	406	3433	50	-61	6.9	51	4.3	3	1.1	14270	6.9	17160	32	0.4						
56-44.2142-104.9711-2-15-	0-W05144	48240	-0.16	536	9598	54	-55	5.8	-21	4.5	4	1.0	17830	6.5	16440	-25	0.3						
56-44.2742-104.8522-2-15-	0-W05145	70650	-0.20	811	13030	58	-73	17.8	97	5.7	4	2.2	36800	7.4	17630	36	0.4						
56-44.2806-104.8208-2-12-	0-W05146	65100	-0.12	730	4720	54	-56	15.2	70	3.7	4	1.0	12370	3.6	17030	34	0.2						
56-44.3117-104.8319-2-15-	0-W05148	59730	-0.15	437	3614	67	-77	10.0	61	4.4	4	1.1	30400	5.4	13400	45	0.5						
56-44.3131-104.7764-2-12-	0-W05149	61840	-0.21	501	2748	68	-78	12.4	50	5.3	4	1.5	27590	7.1	13100	-29	0.9						
56-44.3386-104.7881-2-15-	0-W05150	48950	-0.18	489	-838	61	-63	10.7	56	3.4	4	1.3	24240	9.8	14300	43	0.3						
56-44.3547-104.8306-2-15-	0-W05151	57940	-0.09	405	-791	60	-58	14.9	44	3.0	5	1.0	14930	4.8	12250	39	0.4						
56-44.3239-104.9167-2-15-	0-W05152	82900	-0.17	402	9021	50	-44	9.0	71	6.3	3	1.0	15160	3.4	15040	-29	-0.3						
56-44.3661-104.8972-2-15-	0-W05155	64050	-0.17	1002	13710	76	-78	14.0	80	4.8	4	1.7	25240	6.9	13570	27	0.3						
56-44.3903-104.8944-2-15-	0-W05157	57230	-0.18	836	6535	52	-63	11.8	79	5.4	4	1.4	25920	7.2	15390	-24	-0.3						
56-44.3986-104.8800-2-15-	0-W05158	51390	-0.08	669	13720	48	483	10.7	46	2.5	4	0.8	10700	5.6	17990	29	0.3						
56-44.4258-104.8764-2-14-	0-W05159	89480	-0.18	348	5611	79	-52	12.2	69	6.0	5	1.1	20160	5.4	15860	42	0.6						
56-44.4328-104.8994-2-15-	0-W05160	77750	-0.22	782	8446	72	-49	8.6	85	10.0	4	2.1	39100	5.4	20200	36	0.6						
56-44.3642-104.9619-2-15-	0-W05162	45660	-0.18	827	29380	53	-66	6.7	35	-3.5	4	1.7	23020	8.9	12780	41	0.4						
56-44.4233-104.9819-2-15-	0-W05164	64790	-0.10	630	22910	56	-66	14.3	47	3.4	4	1.0	15170	3.7	16410	31	0.3						
56-44.4592-104.9986-2-15-	0-W05165	47460	-0.12	509	12510	49	93	5.2	46	3.6	3	0.8	14520	5.7	17910	28	0.3						
56-44.5000-104.9714-2-15-	0-W05166	42920	-0.10	797	15580	44	-66	11.6	44	2.8	4	0.9	11690	6.8	16800	35	0.3						
56-44.4367-104.8139-2-15-	0-W05167	38460	-0.07	528	5241	43	-61	14.0	34	1.9	4	0.8	24300	5.5	9850	28	0.2						
56-44.4844-104.8056-2-15-	0-W05169	43640	-0.07	397	4080	58	-51	5.3	46	2.6	4	0.8	11820	7.2	11720	30	0.3						
56-44.4364-104.7897-2-15-	0-W05170	46400	-0.10	322	-559	90	-42	14.9	35	-1.6	10	1.7	25640	8.0	10710	38	0.7						
56-44.4994-104.7861-2-15-	0-W05171	31300	-0.09	322	3988	40	-38	8.5	30	1.3	4	0.8	8971	8.6	7895	23	0.3						
56-44.4917-104.7775-2-15-	0-W05172	34850	-0.06	336	8315	40	-44	9.4	32	1.4	4	0.5	6929	8.5	9630	26	0.3						
56-44.4436-104.7681-2-15-	0-W05173	50730	-0.07	479	7912	71	-47	9.6	39	2.0	5	1.3	13520	10.5	12380	34	0.5						
56-44.4169-104.7869-2-15-	0-W05174	45550	-0.09	400	5452	64	-57	10.5	42	3.0	4	1.0	12650	8.0	10810	32	0.4						
56-44.4283-104.9292-2-15-	0-W05177	56990	-0.08	1387	15530	55	-73	9.9	43	2.7	4	1.2	12450	7.5	13940	34	0.3						
56-44.4967-104.9200-2-15-	0-W05178	59280	-0.07	777	12470	48	-61	11.7	54	3.1	3	0.8	13030	5.3	17130	25	0.3						
56-44.4417-104.8897-2-15-	0-W05180	63150	-0.08	423	-775	70	-55	7.6	63	4.7	4	1.0	18330	8.3	17370	42	0.4						
56-44.4689-104.8808-2-15-	0-W05181	59990	-0.09	639	-433	68	-36	5.4	42	4.9	3	0.7	20130	4.0	12080	25	0.3						
56-44.4961-104.8750-2-15-	0-W05192	73040	-0.13	360	2889	73	-63	17.8	75	4.8	5	1.0	28260	6.6	14780	50	0.4						
56-44.4008-104.8064-2-15-	0-W05183	54740	-0.07	530	5836	56	-64	11.9	36	2.6	5	0.8	14890	4.9	13390	27	0.3						
56-44.2592-104.7826-2-15-	0-W05184	56130	-0.08	898	8433	97	-65	7.6	56	4.1	4	1.2	23810	17.3	13750	52	0.6						
56-44.2078-104.8303-2-15-	0-W05186	48630	-0.08	696	15910	52	-48	8.5	59	3.7	3	0.7	12740	4.1	14320	22	0.3						
56-44.2417-104.7986-2-15-	0-W05187	60150	-0.13	827	12650	55	207	14.7	71	4.7	4	0.8	19140	3.9	20370	33	0.4						
56-44.2081-104.8036-2-15-	0-W05188	62670	-0.08	811	8104	40	-69	11.5	46	2.9	4	0.8	13900	5.0	16990	27	0.2						
56-44.2356-104.8367-2-15-	0-W05189	60740	-0.09	603	29730	58	-63	7.9	68	4.4	3	0.9	14970	4.2	17220	31	0.3						
56-44.2319-104.7717-2-12-	0-W05190	58230	-0.10	3025	27640	83	-65	9.7	61	3.7	5	1.4	26600	9.0	14030	36	0.5						
56-44.2119-104.7569-2-15-	0-W05191	60510	-0.13	838	9838	57	-59	14.3	75	6.3	4	1.1	19810	4.8	16650	37	0.3						
56-44.1958-104.8425-2-15-	0-W05192	60030	-0.08	877	18720	47	-60	11.4	58	4.2	4	0.9	15820	3.4	16730	26	0.3						

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

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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	
56-44.6267-104.5247-2-12-	0-V05131	16350	297	4703	60	-1	5.4	2.9	247	-1	-1	5.6	2431	43	3.0	56	0.302					
56-44.6342-104.5139-2-15-	0-V05132	11530	261	5603	39	-1	3.4	2.6	-197	-1	-1	3.9	2027	28	1.4	-13	0.354					
56-44.6722-104.5119-2-12-	0-V05133	11740	240	4905	23	-1	2.7	1.9	-153	-1	-1	3.1	1715	18	1.7	-21	0.461					
56-44.6625-104.5153-2-12-	0-V05134	24630	327	5543	-21	-1	4.5	3.0	236	-1	-1	5.0	2421	34	2.6	-28	0.382					
56-44.6333-104.5736-2-15-	0-V05135	17000	420	2346	50	-1	6.5	3.2	-214	-1	-1	5.9	2614	48	2.6	-49	0.268					
56-44.6183-104.6072-2-15-	0-V05136	21410	183	1482	38	-1	3.0	1.9	-163	-1	-1	3.2	1873	25	-1.2	-26	0.459					
56-44.6067-104.6103-2-15-	0-V05137	13820	309	3017	32	-1	4.2	3.3	-190	-1	-1	5.0	1812	31	2.2	43	0.268					
56-44.5889-104.5935-2-15-	0-V05138	9907	227	3276	36	-1	3.5	2.6	218	-1	-1	4.4	1915	30	2.6	-24	0.382					
56-44.5750-104.5505-2-15-	0-V05139	12740	250	4597	57	-1	6.5	4.2	-189	-1	-1	8.0	3315	49	2.4	84	0.295					
56-44.6814-104.7036-2-15-	0-V05140	5513	540	1478	-60	-3	4.8	4.5	-245	-3	-1	6.5	2881	46	4.5	-87	0.460					
56-44.6936-104.7000-2-15-	0-V05141	7950	504	1468	-58	-3	6.4	4.4	-233	-3	-1	9.4	3349	47	-3.0	-85	0.391					
56-44.2431-104.9797-2-15-	0-V05142	21700	308	4689	35	-2	4.8	3.4	-249	-1	-1	7.0	2624	52	2.6	-11	0.426					
56-44.3267-104.8542-2-15-	0-V05143	10700	197	6039	-47	-4	7.6	4.0	-209	-2	-1	8.8	3065	100	-2.8	85	0.337					
56-44.2142-104.9711-2-15-	0-V05144	13730	329	4682	-74	-4	6.3	7.0	-237	-4	-2	9.7	2691	52	6.1	-102	0.280					
56-44.2742-104.8522-2-15-	0-V05145	18330	399	7995	-76	-5	13.2	4.5	245	-4	-2	10.7	3922	128	-4.3	-103	0.333					
56-44.2806-104.8208-2-12-	0-V05146	13450	84	3031	-30	-4	8.4	3.9	-250	-1	-1	7.9	4089	175	-2.4	141	0.503					
56-44.3117-104.8319-2-15-	0-V05148	11010	1153	3726	-55	-5	9.0	5.0	-418	-2	-2	12.4	2743	80	3.6	-89	0.488					
56-44.3131-104.7764-2-12-	0-V05149	12120	649	6815	-91	-5	8.5	6.2	-353	-5	-2	16.1	3078	81	-4.0	-130	0.388					
56-44.3386-104.7881-2-15-	0-V05150	8160	679	4562	-70	-4	7.8	4.4	-313	-4	-2	11.1	2864	65	-3.9	117	0.271					
56-44.3547-104.8306-2-15-	0-V05151	9432	442	3272	50	-3	8.0	4.9	-299	-1	-1	8.2	4177	79	3.1	55	0.551					
56-44.3239-104.9167-2-15-	0-V05152	9314	206	1377	-60	-5	10.5	2.9	-237	-3	-2	10.3	3099	107	-3.6	-95	0.295					
56-44.3661-104.8972-2-15-	0-V05156	13400	322	10990	-74	-4	8.6	5.0	-264	-4	-1	11.7	2967	96	5.5	-104	0.307					
56-44.3903-104.8944-2-15-	0-V05157	11220	283	7871	-67	-4	9.2	4.6	-234	-3	-2	9.4	3482	94	-3.9	-100	0.295					
56-44.3986-104.8800-2-15-	0-V05159	13540	225	7713	47	-2	5.6	3.7	-242	-1	-1	7.9	3094	86	2.3	31	0.437					
56-44.4258-104.8764-2-14-	0-V05160	14430	189	2776	-69	-5	13.4	6.2	-236	-3	-2	14.3	4373	114	4.9	95	0.368					
56-44.4328-104.8994-2-15-	0-V05160	16210	118	3354	-102	-5	13.6	5.0	-204	-6	-2	15.1	4115	170	-4.8	-150	0.342					
56-44.3642-104.9619-2-15-	0-V05162	10660	719	4941	-76	-4	6.6	4.3	-308	-3	-2	8.0	2816	52	-5.1	-112	0.381					
56-44.4233-104.9819-2-15-	0-V05164	21070	511	3372	-28	-3	7.9	3.8	-343	-1	-1	8.9	3749	81	-2.2	80	0.690					
56-44.4592-104.9986-2-15-	0-V05165	12060	273	3545	-48	-4	6.4	3.8	-206	-2	-1	8.8	2564	58	-2.8	-75	0.518					
56-44.5000-104.9714-2-15-	0-V05166	14320	527	6568	-26	-3	5.9	3.4	-274	-1	-1	7.3	2751	58	2.8	71	0.611					
56-44.4367-104.8139-2-15-	0-V05167	5296	709	2667	-20	-2	4.9	3.6	-356	-1	-1	6.5	2901	60	2.9	52	0.477					
56-44.4844-104.8056-2-15-	0-V05169	6972	270	4014	32	-2	6.2	3.9	-199	-1	-1	7.4	3280	53	2.6	88	0.393					
56-44.4864-104.7897-2-15-	0-V05170	7461	161	2369	-26	-3	5.9	9.2	-190	-1	1	7.3	3429	56	4.8	85	0.625					
56-44.4994-104.7861-2-15-	0-V05171	5292	247	2020	-22	-3	5.6	3.7	-183	-1	-1	6.4	2819	37	2.7	45	0.394					
56-44.4917-104.7775-2-15-	0-V05172	7211	248	1973	-14	-2	4.3	3.3	-214	-1	-1	6.0	3388	41	3.6	-51	0.402					
56-44.4436-104.7581-2-15-	0-V05173	9043	392	2577	39	-2	7.0	6.6	-223	-1	1	8.9	3131	57	3.7	126	0.528					
56-44.4169-104.7869-2-15-	0-V05174	5321	787	2821	-21	-3	6.5	5.8	-331	-1	-1	8.0	3996	66	2.6	68	0.423					
56-44.4283-104.9292-2-15-	0-V05177	11570	202	15450	-21	-3	5.1	4.0	299	-1	-1	6.5	2681	57	3.1	38	0.446					
56-44.4967-104.9200-2-15-	0-V05179	15740	421	4020	37	-2	6.7	3.4	-281	-1	-1	7.5	3818	118	2.4	76	0.469					
56-44.4417-104.8897-2-15-	0-V05180	9941	374	3733	50	-3	8.6	4.9	-234	-1	-1	11.4	3034	102	4.0	65	0.410					
56-44.4689-104.8808-2-15-	0-V05181	9600	124	1929	36	-3	7.4	3.8	-163	-1	-1	11.7	2626	81	2.3	-33	0.521					
56-44.4961-104.8750-2-15-	0-V05182	9840	1051	2548	78	-4	12.1	5.3	-369	-1	-1	11.1	3866	111	3.6	136	0.339					
56-44.4008-104.8064-2-15-	0-V05183	7192	627	3444	31	-2	6.4	4.0	-339	-1	-1	8.1	3210	72	2.4	-18	0.493					
56-44.2592-104.7836-2-15-	0-V05184	11710	669	5051	40	-2	8.3	7.0	-283	-1	-1	16.8	3079	98	4.9	94	0.318					
56-44.2078-104.8303-2-15-	0-V05186	17730	205	4753	34	-2	6.5	3.5	-190	-1	-1	8.1	3305	132	2.6	109	0.325					
56-44.2417-104.7986-2-15-	0-V05187	25950	276	7516	67	-4	11.1	3.2	-263	-1	-1	9.2	4046	160	-2.6	42	0.437					
56-44.2081-104.8036-2-15-	0-V05188	14330	254	6740	39	-2	6.7	3.1	-265	-1	-1	6.7	3925	112	2.4	-43	0.455					
56-44.2356-104.8367-2-15-	0-V05189	16520	233	3647	49	-3	8.2	4.7	-228	-1	-1	9.0	3102	171	3.0	108	0.516					
56-44.2319-104.7717-2-12-	0-V05190	12190	791	3480	48	-3	8.2	6.4	-337	-1	-1	13.1	3502	110	4.0	93	0.380					
56-44.2119-104.7569-2-15-	0-V05191	19780	237	5073	61	-4	10.9	4.4	-231	-1	-1	9.7	3804	161	-2.4	130	0.388					
56-44.1958-104.8425-2-15-	0-V05192	23480	209	4336	36	-2	7.3	3.8	-242	-1	-1	7.4	3228	149	2.7	87	0.396					

[illegible]

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

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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	
56-44.1964-104.8328-2-15-						0-405193	-5	-5	-5	24	-20	17	17	-10	-15	3	61	
56-44.6050-104.7200-2-15-						0-405194	-5	-5	-5	21	-20	-15	6	-10	-15	1	22	
56-44.6603-104.7372-2-15-						0-405195	-5	-5	-5	19	-20	-15	-5	-10	-15	1	22	
56-44.6653-104.7361-2-15-						0-405196	-5	-5	-5	11	-20	-15	-5	-10	-15	2	22	
56-44.6647-104.5797-2-15-						0-405197	-5	-5	-5	18	-20	-15	6	-10	-15	1	21	
56-44.7006-104.5975-2-15-						0-405198	-5	-5	-5	22	-20	-15	-5	-10	-15	1	41	
56-44.5333-104.6175-2-15-						0-405199	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	15	
56-44.1931-104.9306-2-15-						0-405200	-5	-5	-5	15	-20	-15	5	-10	-15	2	22	
56-44.1775-104.9017-2-15-						0-405204	-5	-5	-5	22	-20	-15	6	-10	-15	1	40	
56-44.2350-104.9183-2-15-						0-405205	-5	-5	-5	16	-20	-15	10	-10	-15	1	18	
56-44.2783-104.7433-2-15-						0-405207	-5	-5	-5	19	-20	-15	7	-10	-15	2	32	
56-44.2833-104.6931-2-15-						0-405208	-5	-5	-5	23	-20	-15	-5	-10	-15	2	24	
56-44.2833-104.6297-2-15-						0-405209	-5	-5	-5	22	-20	-15	7	-10	-15	2	37	
56-44.2867-104.5833-2-15-						0-405210	-5	-5	-5	12	-20	-15	8	-10	-15	1	21	
56-44.3144-104.5814-2-15-						0-405211	-5	-5	-5	23	-20	-15	15	-10	-15	1	30	
56-44.3467-104.7028-2-15-						0-405212	-5	-5	-5	33	-20	-15	11	-10	-15	2	40	
56-44.4028-104.7369-2-15-						0-405215	-5	-5	-5	22	-20	-15	-5	-10	-15	-1	11	
56-44.4725-104.7242-2-15-						0-405216	-5	-5	-5	16	-20	-15	-5	-10	-15	1	13	
56-44.4322-104.6811-2-15-						0-405217	-5	-5	-5	-10	-20	-15	-5	-10	-15	-1	7	
56-44.4511-104.6917-2-99-						0-405219	-5	-5	-5	20	-20	-15	-5	-10	-15	1	20	
56-44.3586-104.6575-2-15-						0-405221	-5	-5	-5	22	-20	-15	12	-10	-15	1	34	
56-44.3633-104.6444-2-15-						0-405222	-5	-5	-5	27	-20	-15	-5	-10	-15	2	26	
56-44.3450-104.6256-2-15-						0-405223	-5	-5	-5	23	-20	-15	10	-10	-15	-1	22	
56-44.4778-104.6447-2-15-						0-405224	-5	-5	-5	16	-20	-15	8	-10	-15	1	19	
56-44.4875-104.5853-2-11-						0-405225	-5	-5	-5	16	-20	-15	-5	-10	-15	1	11	
56-44.4950-104.6042-2-12-						0-405226	-5	-5	-5	17	-20	-15	7	-10	-15	1	22	
56-44.4756-104.5503-2-12-						0-405229	-5	-5	-5	24	-20	-15	-5	-10	-15	1	18	
56-44.4717-104.5472-2-12-						0-405230	-5	-5	-5	15	-20	-15	5	-10	-15	1	13	
56-44.4625-104.5514-2-12-						0-405231	-5	-5	-5	11	-20	-15	-5	-10	-15	1	21	
56-44.4856-104.5125-2-12-						0-405232	-5	-5	-5	21	-20	-15	6	-10	-15	2	25	
56-44.4550-104.5861-2-15-						0-405234	-5	-5	-5	17	-20	-15	7	-10	-15	1	19	
56-44.4550-104.6578-2-11-						0-405235	-5	-5	-5	14	-20	-15	-5	-10	-15	1	13	
56-44.3967-104.5614-2-12-						0-405236	-5	-5	-5	24	-20	-15	6	-10	-15	2	27	
56-44.2958-104.5019-2-15-						0-405238	-5	-5	-5	15	-20	-15	-5	-10	-15	1	14	
56-44.2833-104.5061-2-15-						0-405239	-5	-5	-5	18	-20	-15	8	-10	-15	1	24	
56-44.2675-104.6292-2-15-						0-405240	-5	-5	-5	30	-20	-15	6	-10	-15	2	28	
56-44.2747-104.6381-2-15-						0-405241	-5	-5	-5	21	-20	-15	13	-10	-15	2	34	
56-44.2981-104.6244-2-15-						0-405242	-5	-5	-5	24	-20	-15	14	-10	-15	1	34	
56-44.3258-104.5786-2-15-						0-405244	-5	-5	-5	14	-20	-15	-5	-10	-15	1	18	
56-44.3353-104.5664-2-15-						0-405245	-5	-5	-5	15	-20	-15	7	-10	-15	1	17	
56-44.3478-104.5453-2-15-						0-405246	-5	-5	-5	14	-20	-15	6	-10	-15	1	20	
56-44.3836-104.6056-2-11-						0-405250	-5	-5	-5	15	-20	-15	-5	-10	-15	1	12	
56-44.4189-104.6000-2-15-						0-405252	-5	-5	-5	24	-20	-15	12	-10	-15	1	21	
56-44.4972-104.7036-2-15-						0-405253	-5	-5	-5	13	-20	-15	9	-10	-15	-1	12	
56-44.2833-104.7158-2-15-						0-405254	-5	-5	-5	29	-20	-15	16	-10	-15	2	20	
56-44.1992-104.7389-2-15-						0-405255	-5	-5	-5	20	-20	-15	12	-10	-15	2	35	
56-44.2142-104.7381-2-12-						0-405256	-5	-5	-5	17	-20	-15	19	-10	-15	2	27	
56-44.2483-104.7378-2-12-						0-405257	-5	-5	-5	32	-20	-15	14	-10	-15	2	27	
56-44.1594-104.6739-2-15-						0-405258	-5	-5	-5	28	-20	-15	-5	-10	-15	4	25	
56-44.2228-104.6442-2-15-						0-405259	-5	-5	-5	23	-20	-15	7	-10	-15	2	16	
56-44.2031-104.6461-2-15-						0-405261	-5	-5	-5	21	-20	-15	12	-10	-15	3	22	

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	
56-44.1964-104.3328-2-15-	0-W05103	59190	-0.09	731	25980	59	143	9.3	56	4.4	4	1.0	22840	5.0	16450	39	0.3						
56-44.6050-104.7200-2-15-	0-W05104	39090	-0.09	493	21110	36	-53	6.1	21	1.8	3	0.7	7921	4.4	14900	19	0.2						
56-44.6603-104.7372-2-15-	0-W05105	31000	-0.14	375	5838	47	-36	10.3	-20	4.0	4	1.4	22220	15.7	11250	32	0.3						
56-44.6653-104.7361-2-15-	0-W05106	32110	-0.07	380	5047	40	-40	9.9	30	1.3	3	0.7	10340	8.8	10080	25	0.4						
56-44.6647-104.5797-2-15-	0-W05107	33270	-0.10	291	18240	31	-45	4.3	24	-1.7	2	0.6	8710	9.9	16760	-18	0.2						
56-44.7006-104.5975-2-15-	0-W05108	39050	-0.15	473	35820	41	-52	5.7	44	3.7	3	1.1	16950	6.8	21430	-21	0.3						
56-44.5333-104.6175-2-15-	0-W05109	26510	-0.14	384	20420	22	-41	3.8	-19	-2.5	2	0.6	8500	7.5	18170	-18	-0.2						
56-44.1931-104.9306-2-15-	0-W05203	50570	-0.06	580	14140	64	-59	4.8	53	3.4	4	1.4	15090	8.1	19820	32	0.3						
56-44.1775-104.9017-2-15-	0-W05204	63900	-0.12	714	18570	52	-83	6.5	51	2.8	3	1.3	14680	5.4	16800	35	0.3						
56-44.2350-104.9183-2-15-	0-W05205	40500	-0.13	558	9151	56	-41	5.3	50	3.0	4	1.7	14780	11.1	14660	30	0.4						
56-44.2783-104.7433-2-15-	0-W05207	37840	-0.18	657	13170	53	369	5.3	53	-3.4	4	1.7	20470	12.0	12770	36	0.3						
56-44.2833-104.6931-2-15-	0-W05208	43150	-0.07	446	70410	41	-56	9.3	29	2.9	3	0.7	12530	6.5	13560	25	0.3						
56-44.2833-104.6297-2-15-	0-W05209	49150	-0.13	338	5094	71	-56	7.9	43	-2.2	4	1.0	18260	9.8	11700	37	0.6						
56-44.2867-104.5833-2-15-	0-W05210	30010	-0.15	217	-531	62	-37	7.6	46	-2.9	4	1.3	14060	12.9	7430	-22	0.3						
56-44.3144-104.6814-2-15-	0-W05211	54400	-0.21	456	4497	75	-69	16.2	66	6.4	6	2.0	39550	18.1	10060	55	0.6						
56-44.3457-104.7028-2-15-	0-W05212	53070	-0.09	510	4404	69	-88	17.4	58	2.7	5	1.0	20080	8.4	9231	36	0.6						
56-44.4028-104.7369-2-15-	0-W05215	21540	-0.10	245	-372	36	-29	3.5	28	-1.6	3	0.8	6438	10.0	6361	25	0.4						
56-44.4725-104.7242-2-15-	0-W05216	32840	-0.14	582	31320	44	47	7.3	-20	-2.7	3	1.7	15260	6.8	10920	24	0.4						
56-44.4322-104.6811-2-15-	0-W05217	16330	-0.13	1320	28560	41	-32	4.9	-18	-2.4	3	1.5	11050	23.7	5146	26	0.4						
56-44.4511-104.6917-2-99-	0-W05218	37490	-0.08	584	37450	40	-63	10.9	28	2.1	4	0.9	8118	9.4	10030	23	0.3						
56-44.3586-104.6575-2-15-	0-W05221	53420	-0.15	315	23420	80	-65	8.0	42	2.9	5	1.2	16370	5.8	15460	40	0.5						
56-44.3633-104.6444-2-15-	0-W05222	50640	-0.22	414	63000	57	-70	6.1	-29	6.9	4	1.5	24160	4.6	15310	35	0.5						
56-44.3450-104.6256-2-15-	0-W05223	40520	-0.18	532	41380	59	-56	7.7	35	-3.3	4	1.2	18990	7.8	12030	32	0.4						
56-44.4778-104.6447-2-15-	0-W05224	34230	-0.07	415	24130	23	-73	8.4	24	1.6	3	0.6	6111	5.4	14140	19	0.2						
56-44.4875-104.5853-2-11-	0-W05225	24810	-0.12	166	4667	41	-31	4.8	24	-1.9	3	0.8	6920	13.0	6426	22	0.4						
56-44.4950-104.6042-2-12-	0-W05226	34260	-0.16	363	20520	48	-51	7.0	48	-3.0	3	1.5	13660	11.1	12010	-23	0.4						
56-44.4756-104.5503-2-12-	0-W05229	37620	-0.21	544	63930	44	-65	10.9	-28	-3.8	4	1.5	17100	10.6	13440	-27	-0.3						
56-44.4717-104.5472-2-12-	0-W05230	29750	-0.08	932	69940	30	-66	10.7	28	1.5	3	0.9	7879	8.3	11890	15	0.3						
56-44.4625-104.5514-2-12-	0-W05231	36590	-0.11	965	37530	54	-56	4.8	36	2.8	3	1.2	9929	18.9	15610	28	0.4						
56-44.4856-104.5125-2-12-	0-W05232	36730	-0.19	497	30240	51	-64	5.5	55	-3.5	3	1.3	13700	14.0	15810	-27	-0.3						
56-44.4550-104.5861-2-15-	0-W05234	43010	-0.18	612	15770	69	-52	8.9	54	-3.3	4	1.3	19760	10.0	13750	23	0.4						
56-44.4550-104.6578-2-11-	0-W05235	23050	-0.07	303	1850	50	-42	10.8	34	-1.1	4	0.7	5675	9.6	7725	20	0.3						
56-44.3967-104.5614-2-12-	0-W05236	44800	-0.14	321	10140	54	-56	10.3	55	-2.4	4	1.0	15340	8.3	12610	31	0.5						
56-44.2958-104.5019-2-15-	0-W05238	28600	-0.14	353	15680	50	-32	4.8	27	-2.6	3	1.0	9951	9.1	9072	17	0.4						
56-44.2833-104.5061-2-15-	0-W05239	45200	-0.19	665	74320	54	-61	11.4	-25	5.1	4	1.1	26500	7.1	16640	40	-0.3						
56-44.2675-104.6292-2-15-	0-W05240	45860	-0.08	451	2688	49	-65	12.5	43	2.0	5	0.8	15650	8.1	13050	30	0.4						
56-44.2747-104.6381-2-15-	0-W05241	53890	-0.14	463	-826	57	-66	8.4	64	3.2	4	1.1	16780	6.2	14440	39	0.4						
56-44.2981-104.6244-2-15-	0-W05242	46720	-0.15	376	13640	72	-50	12.0	53	-2.8	5	2.1	22880	14.8	10080	41	0.6						
56-44.3258-104.5786-2-15-	0-W05244	30980	-0.16	877	40820	51	-53	9.5	42	-3.0	4	1.5	17250	15.0	10490	-21	0.4						
56-44.3353-104.5664-2-15-	0-W05245	44690	-0.09	240	-591	71	-36	9.5	43	1.8	5	0.9	7374	5.7	7165	39	0.4						
56-44.3478-104.5458-2-15-	0-W05246	38630	-0.14	447	4840	58	-59	5.5	29	2.7	3	1.0	10910	11.0	12740	-23	-0.2						
56-44.3836-104.6056-2-11-	0-W05250	20040	-0.14	244	3617	52	-36	4.7	45	-2.5	4	1.2	9232	16.6	7520	25	0.4						
56-44.4189-104.6000-2-15-	0-W05252	39560	-0.21	558	6118	59	-67	9.7	49	-3.8	4	1.2	18820	8.8	13840	36	0.4						
56-44.4972-104.7036-2-15-	0-W05253	26080	-0.06	275	16540	17	-61	6.3	14	-0.8	2	0.4	3846	5.3	16940	8	0.2						
56-44.2833-104.7158-2-15-	0-W05254	60230	-0.13	416	3320	46	-51	3.9	48	4.4	3	0.8	21430	5.3	12480	36	0.3						
56-44.1992-104.7389-2-15-	0-W05255	49600	-0.17	654	5470	59	130	8.3	57	-3.2	4	1.9	18100	6.5	18140	30	0.3						
56-44.2142-104.7381-2-12-	0-W05256	47310	-0.17	551	5050	181	-74	24.1	106	8.2	4	2.4	79480	18.7	14370	104	1.0						
56-44.2483-104.7378-2-12-	0-W05257	52450	-0.09	615	3654	69	-97	13.5	48	3.5	4	1.0	34230	6.6	14030	40	0.5						
56-44.1594-104.6739-2-15-	0-W05258	47170	-0.10	585	3899	50	-105	11.1	42	4.3	3	0.9	71390	5.9	11090	36	0.4						
56-44.2228-104.6442-2-15-	0-W05259	33730	-0.09	489	-1422	77	-92	11.4	39	2.0	4	1.0	22930	12.7	11830	43	0.5						
56-44.2031-104.6461-2-15-	0-W05261	43680	-0.08	486	-1835	43	-122	12.5	32	3.1	3	0.7	63320	8.7	-5855	32	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		
56-44.1964-104.8328-2-15-	0-405193	24190	378	4851	49	-3	9.4	4.6	-238	-1	-1	8.8	3113	148	2.6	93	0.357						
56-44.6050-104.7200-2-15-	0-405194	15440	388	3569	-18	-2	4.5	2.5	-246	-1	1	4.7	2352	45	2.3	-37	0.332						
56-44.6603-104.7372-2-15-	0-405195	6917	437	1732	-59	-3	5.9	4.3	-208	-3	-1	9.3	2970	53	-3.1	-87	0.341						
56-44.6653-104.7361-2-15-	0-405196	5790	395	1490	-19	-2	4.4	3.1	-236	-1	-1	6.3	2908	51	2.1	-25	0.497						
56-44.6647-104.5797-2-15-	0-405197	12800	366	2762	-40	-3	3.8	2.5	-204	-2	-1	4.3	1928	24	2.9	-66	0.405						
56-44.7006-104.5975-2-15-	0-405198	25100	373	3786	-71	-3	5.8	2.7	-227	-4	-2	6.7	2596	47	-3.3	-106	0.261						
56-44.5333-104.6175-2-15-	0-405199	10420	222	3329	-59	-3	3.2	2.2	-171	-3	-1	3.1	1632	17	-3.1	-85	0.365						
56-44.1931-104.9306-2-15-	0-405200	15180	265	4969	56	-2	5.9	4.6	-218	-1	-1	9.0	3213	53	3.3	-19	0.276						
56-44.1775-104.9017-2-15-	0-405201	14640	221	14990	-46	-3	6.2	4.7	-228	-2	-1	9.4	2838	66	4.2	-43	0.320						
56-44.2350-104.9183-2-15-	0-405202	11770	246	3394	-62	-3	4.9	4.4	-179	-4	-1	9.8	2803	44	4.3	-92	0.287						
56-44.2783-104.7433-2-15-	0-405203	8312	200	10100	-76	-4	5.7	4.0	-217	-4	-2	9.8	3053	58	-4.1	-104	0.346						
56-44.2833-104.6931-2-15-	0-405204	10640	451	2871	29	-2	5.2	3.2	-258	-1	-1	7.5	2347	58	2.4	-28	0.424						
56-44.2833-104.6297-2-15-	0-405205	7043	525	3734	-48	-4	7.9	4.9	-263	-2	-1	9.1	3061	69	3.7	76	0.426						
56-44.2867-104.5833-2-15-	0-405210	3022	292	1547	-74	-3	5.6	4.5	-198	-4	-2	9.2	4043	45	3.8	-109	0.363						
56-44.3144-104.6814-2-15-	0-405211	8583	1074	3329	-85	-5	9.9	5.6	-389	-4	-2	15.4	3711	76	7.0	-132	0.283						
56-44.3467-104.7028-2-15-	0-405212	10120	1354	4052	41	-3	7.6	5.0	-493	-1	1	10.7	3849	77	3.4	-70	0.409						
56-44.4028-104.7369-2-15-	0-405215	3125	101	1250	-38	-3	3.7	2.7	-120	-2	-1	5.3	2264	27	3.0	-61	0.377						
56-44.4725-104.7242-2-15-	0-405216	11440	280	2815	-68	-3	5.2	3.7	252	-3	-1	6.9	2215	40	-3.3	-102	0.355						
56-44.4322-104.6811-2-15-	0-405217	5530	199	1284	-52	-3	3.8	2.6	-147	-2	-1	4.7	3069	23	3.4	-79	0.477						
56-44.4511-104.6917-2-99-	0-405218	9011	167	4611	-21	-2	4.7	3.5	-270	-1	-1	6.4	2790	47	2.8	-32	0.384						
56-44.3586-104.6575-2-15-	0-405221	15220	549	3428	-60	-5	9.5	6.4	-300	-3	-1	9.2	3123	60	6.1	-94	0.274						
56-44.3633-104.6444-2-15-	0-405222	26420	482	4060	-104	-5	8.4	5.7	-309	-6	-2	8.9	3294	67	-4.8	-155	0.326						
56-44.3450-104.6256-2-15-	0-405223	15570	407	4011	-72	-4	7.6	4.2	243	-3	-2	8.4	3243	48	-3.7	-103	0.342						
56-44.4778-104.6447-2-15-	0-405224	18590	632	6099	-18	-2	3.3	1.9	-329	-1	-1	4.1	2233	27	1.8	-27	0.395						
56-44.4875-104.5853-2-11-	0-405225	3860	130	1719	-45	-3	4.7	3.5	-148	-2	1	7.3	2377	34	3.2	-70	0.367						
56-44.4950-104.6042-2-12-	0-405226	11330	483	2192	-77	-4	5.7	3.9	-261	-3	-2	6.0	2371	43	-3.3	-113	0.328						
56-44.4756-104.5503-2-12-	0-405229	10610	757	2934	-85	-4	6.7	4.0	-341	-5	-2	7.6	2705	54	-4.6	118	0.300						
56-44.4717-104.5472-2-12-	0-405230	10320	479	2980	28	-2	3.8	2.6	-296	-1	-1	4.7	2420	49	2.1	-29	0.409						
56-44.4625-104.5514-2-12-	0-405231	12980	348	4111	-44	-3	5.4	4.0	-217	-2	-1	7.2	2660	42	4.6	-68	0.394						
56-44.4856-104.5125-2-12-	0-405232	9070	307	5193	-89	-4	4.7	4.3	-249	-4	-2	6.7	2756	48	-4.0	-131	0.403						
56-44.4550-104.5861-2-15-	0-405234	12590	322	3730	-73	-4	7.7	5.0	-228	-3	-2	9.7	3386	55	4.3	-107	0.260						
56-44.4550-104.6578-2-11-	0-405235	3895	262	2014	-19	-2	3.3	3.3	-225	-1	-1	5.9	3555	32	2.3	29	0.610						
56-44.3967-104.5614-2-12-	0-405236	10030	685	2085	-56	-4	6.9	5.6	-316	-2	-1	9.6	3454	61	-3.4	-87	0.354						
56-44.2958-104.5019-2-15-	0-405238	6541	224	1361	-66	-3	4.7	3.4	-172	-3	-1	6.1	2613	33	-3.1	-97	0.352						
56-44.2833-104.5061-2-15-	0-405239	15040	546	2275	-78	-4	8.6	4.0	-283	-3	-2	9.5	3090	62	-4.2	-113	0.237						
56-44.2675-104.6292-2-15-	0-405240	6245	498	4362	29	-2	5.8	4.2	-306	-1	-1	8.0	4012	68	2.2	55	0.494						
56-44.2747-104.6381-2-15-	0-405241	9673	666	4192	-55	-4	9.0	4.6	-318	-2	-1	10.3	2853	77	-3.6	-83	0.367						
56-44.2981-104.6244-2-15-	0-405242	7987	453	3530	-69	-3	7.6	5.6	-245	-4	-2	10.3	4201	68	-4.2	-102	0.425						
56-44.3258-104.5786-2-15-	0-405244	9881	626	2283	-66	-4	6.1	4.5	-276	-3	-2	6.1	2552	39	-3.6	-95	0.431						
56-44.3353-104.5664-2-15-	0-405245	4852	120	1473	-22	-2	5.8	5.2	-197	-1	-1	7.1	3259	69	4.0	-31	0.538						
56-44.3478-104.5458-2-15-	0-405246	6210	380	4318	-52	-4	5.1	3.9	-252	-2	-1	8.4	3208	56	-2.8	-85	0.361						
56-44.3836-104.6056-2-11-	0-405250	2943	314	1877	-65	-3	3.4	4.9	-200	-3	-1	6.9	3491	29	4.3	-97	0.506						
56-44.4189-104.6000-2-15-	0-405252	4510	697	4289	-85	-5	6.7	4.7	-335	-4	-2	7.6	3562	52	-5.6	-127	0.422						
56-44.4972-104.7036-2-15-	0-405253	10780	339	6939	22	-1	1.6	1.1	-215	-1	-1	2.4	1755	13	-1.1	-21	0.400						
56-44.2833-104.7158-2-15-	0-405254	9449	332	3089	-47	-4	7.4	3.1	-227	-2	-1	14.2	1956	73	-2.8	-75	0.485						
56-44.1992-104.7389-2-15-	0-405255	10580	190	9874	-79	-4	6.8	5.4	-230	-4	-2	11.7	3512	73	-4.5	-116	0.387						
56-44.2142-104.7381-2-12-	0-405256	7218	1098	5156	93	-5	18.8	11.0	-328	-1	-2	27.1	2659	77	8.6	234	0.180						
56-44.2483-104.7378-2-12-	0-405257	7146	1698	4073	40	-3	6.9	5.3	-563	-1	-1	12.1	2546	76	3.5	92	0.530						
56-44.1594-104.6739-2-15-	0-405258	-4701	2082	4058	-31	3	8.4	4.5	-487	-1	-1	13.6	-1088	67	3.8	148	0.518						
56-44.2228-104.6442-2-15-	0-405259	-4365	1936	3599	-25	-3	4.8	6.1	-482	-1	-1	10.5	2929	62	3.8	103	0.343						
56-44.2031-104.6461-2-15-	0-405261	-5504	2347	3141	33	2	6.8	3.3	-613	-1	-1	12.0	-1403	74	2.9	110	0.677						

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

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DOE SAMPLE NUMBER					LASL SAMPLE LOCATION NUMBER AND FIELD DATA																				U CONCENTRATION									
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REFUTATE	LASL SAMPLE LOCATION NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	CONDUCTIVITY (umho/cm)	SONTILLOMETER (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																										
56-44.1950-104.6653-2-15-	0-405262-08/24/77-19-	24-	-	-	-	13-1-6-4-6-	-1-	-2-3-3-2-4-	-3-	-	-	-	-	-	13-1-6-4-6-	-1-	-2-3-3-2-4-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.25		
56-44.1397-104.6714-2-15-	0-405263-08/24/77-20-	22-	-	-	-	22-1-7-4-7-	-1-	-2-4-3-2-4-	-3-	-	-	-	-	-	22-1-7-4-7-	-1-	-2-4-3-2-4-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.08	
56-44.0925-104.5997-2-15-	0-405264-08/28/77-15-	20-	-	-	-	5-1-7-5-6-	-1-	-2-4-3-2-2-	-3-	-	-	-	-	-	5-1-7-5-6-	-1-	-2-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.13	
56-44.1100-104.5911-2-15-	0-405265-08/28/77-16-	23-	-	-	-	11-1-7-5-7-	-1-	-3-4-2-2-2-	-3-	-	-	-	-	-	11-1-7-5-7-	-1-	-3-4-2-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.41	
56-44.0631-104.5981-2-12-	0-405266-08/28/77-17-	22-17.5-	-	-	-	13-1-7-5-7-3-4-2-	-2-	-2-4-3-2-2-	-3-	-	-	-	-	-	13-1-7-5-7-3-4-2-	-2-	-2-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.36	
56-44.0325-104.5372-2-15-	0-405267-08/28/77-18-	20-	-	-	-	8-1-7-5-7-	-1-	-2-4-3-3-2-	-3-	-	-	-	-	-	8-1-7-5-7-	-1-	-2-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.13	
56-44.0500-104.5558-2-15-	0-405268-08/28/77-18-	20-	-	-	-	8-1-7-5-7-	-1-	-1-1-2-3-3-	-2-	-	-	-	-	-	8-1-7-5-7-	-1-	-1-1-2-3-3-	-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.54	
56-44.0475-104.5297-2-15-	0-405269-08/28/77-18-	21-	-	-	-	11-1-7-5-7-	-1-	-1-4-3-2-2-	-3-	-	-	-	-	-	11-1-7-5-7-	-1-	-1-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.32	
56-44.0894-104.5667-2-15-	0-405271-08/28/77-20-	17-	-	-	-	11-1-1-5-6-	-1-	-2-4-3-2-2-	-3-	-	-	-	-	-	11-1-1-5-6-	-1-	-2-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.17	
56-44.1222-104.6119-2-15-	0-405272-08/29/77-12-	21-	-	-	-	30-1-7-5-6-	-1-	-3-4-3-2-2-	-3-	-	-	-	-	-	30-1-7-5-6-	-1-	-3-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.97	
56-44.2144-104.5839-2-15-	0-405273-08/29/77-13-	24-	-	-	-	8-1-7-5-6-	-1-	-3-4-3-2-1-	-3-	-	-	-	-	-	8-1-7-5-6-	-1-	-3-4-3-2-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.10	
56-44.2489-104.5344-2-15-	0-405274-08/29/77-13-	25-	-	-	-	5-1-1-5-1-	-1-	-3-4-3-3-1-	-3-	-	-	-	-	-	5-1-1-5-1-	-1-	-3-4-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.65	
56-44.2206-104.5269-2-97-	0-405275-08/29/77-14-	26-	-	-	-	19-1-1-5-6-	-1-	-4-3-4-2-	-3-	-	-	-	-	-	19-1-1-5-6-	-1-	-4-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.59	
56-44.1978-104.5047-2-15-	0-405276-08/29/77-15-	27-	-	-	-	13-1-1-5-6-	-1-	-1-4-3-4-2-	-3-	-	-	-	-	-	13-1-1-5-6-	-1-	-1-4-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.68	
56-44.2078-104.5103-2-15-	0-405277-08/29/77-15-	25-	-	-	-	16-1-1-5-6-	-1-	-3-4-3-4-2-	-3-	-	-	-	-	-	16-1-1-5-6-	-1-	-3-4-3-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.26	
56-44.1808-104.5567-2-15-	0-405279-08/29/77-18-	23-	-	-	-	19-1-7-5-6-	-1-	-3-3-3-2-2-	-3-	-	-	-	-	-	19-1-7-5-6-	-1-	-3-3-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
56-44.1658-104.5672-2-15-	0-405280-08/29/77-18-	24-	-	-	-	16-1-7-5-6-	-1-	-3-4-4-2-2-	-3-	-	-	-	-	-	16-1-7-5-6-	-1-	-3-4-4-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.16	
56-44.1661-104.5375-2-15-	0-405281-08/29/77-18-	25-	-	-	-	16-1-1-5-6-	-1-	-1-4-3-3-2-	-3-	-	-	-	-	-	16-1-1-5-6-	-1-	-1-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.38	
56-44.1661-104.5008-2-15-	0-405283-08/30/77-9-	15-	-	-	-	16-1-7-5-6-	-1-	-1-4-3-2-2-	-3-	-	-	-	-	-	16-1-7-5-6-	-1-	-1-4-3-2-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.43	
56-44.1853-104.4078-2-15-	0-405284-08/30/77-9-	17-	-	-	-	11-1-7-5-7-	-1-	-3-4-4-4-2-	-3-	-	-	-	-	-	11-1-7-5-7-	-1-	-3-4-4-4-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.36	
56-44.1753-104.4378-2-15-	0-405285-08/30/77-10-	20-	-	-	-	8-1-1-5-1-	-1-	-2-4-3-3-2-	-3-	-	-	-	-	-	8-1-1-5-1-	-1-	-2-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.70	
56-44.1811-104.4411-2-15-	0-405286-08/30/77-10-	17-	-	-	-	8-1-1-5-1-	-1-	-1-4-3-3-2-	-3-	-	-	-	-	-	8-1-1-5-1-	-1-	-1-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.71	
56-44.2036-104.4625-2-15-	0-405287-08/30/77-10-	20-	-	-	-	5-1-1-5-6-	-1-	-1-6-4-3-2-	-3-	-	-	-	-	-	5-1-1-5-6-	-1-	-1-6-4-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.98	
56-44.2381-104.4297-2-15-	0-405288-08/30/77-11-	20-	-	-	-	11-1-1-5-6-	-1-	-2-4-4-3-2-	-3-	-	-	-	-	-	11-1-1-5-6-	-1-	-2-4-4-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
56-44.2197-104.3936-2-15-	0-405289-08/30/77-16-	23-	-	-	-	11-1-1-5-7-	-1-	-1-4-3-3-3-	-3-	-	-	-	-	-	11-1-1-5-7-	-1-	-1-4-3-3-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.84	
56-44.2081-104.3867-2-15-	0-405290-08/30/77-16-	21-	-	-	-	19-1-1-5-6-	-1-	-1-4-3-4-3-	-3-	-	-	-	-	-	19-1-1-5-6-	-1-	-1-4-3-4-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.98	
56-44.2392-104.3506-2-15-	0-405291-08/30/77-17-	21-	-	-	-	11-1-1-5-1-	-1-	-2-4-3-4-3-	-3-	-	-	-	-	-	11-1-1-5-1-	-1-	-2-4-3-4-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.64	
56-44.1314-104.4483-2-15-	0-405292-08/30/77-18-	21-	-	-	-	8-1-7-5-6-	-1-	-1-4-3-3-2-	-3-	-	-	-	-	-	8-1-7-5-6-	-1-	-1-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.24	
56-44.1153-104.4469-2-15-	0-405293-08/30/77-18-	20-	-	-	-	22-1-7-5-6-	-1-	-1-4-3-3-3-	-3-	-	-	-	-	-	22-1-7-5-6-	-1-	-1-4-3-3-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.63	
56-44.0814-104.4761-2-15-	0-405294-08/30/77-19-	21-	-	-	-	13-1-7-5-7-	-1-	-3-4-3-2-3-	-3-	-	-	-	-	-	13-1-7-5-7-	-1-	-3-4-3-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.41	
56-44.0811-104.4867-2-15-	0-405295-08/30/77-19-	21-	-	-	-	2-1-8-5-8-	-1-	-2-4-2-3-3-	-3-	-	-	-	-	-	2-1-8-5-8-	-1-	-2-4-2-3-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.94	
56-44.0458-104.4831-2-15-	0-405296-08/30/77-20-	21-	-	-	-	8-1-8-5-8-	-1-	-2-4-2-2-3-	-3-	-	-	-	-	-	8-1-8-5-8-	-1-	-2-4-2-2-3-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.18	
56-44.0100-104.4275-2-15-	0-405297-08/31/77-9-	12-	-	-	-	13-1-7-5-6-	-1-	-1-4-3-3-2-	-3-	-	-	-	-	-	13-1-7-5-6-	-1-	-1-4-3-3-2-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.60	
56-44.0308-104.4214-2-15-	0-405298-08/31/77-12-	19-	-	-	-	5-1-1-5-6-	-1-	-3-4-4-4-1-	-3-	-	-	-	-	-	5-1-1-5-6-	-1-	-3-4-4-4-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.29	
56-44.0622-104.3819-2-15-	0-405299-08/31/77-13-	17-	-	-	-	8-1-7-5-7-	-1-	-2-4-3-3-1-	-3-	-	-	-	-	-	8-1-7-5-7-	-1-	-2-4-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.68	
56-44.1172-104.3703-2-15-	0-405300-08/31/77-14-	16-	-	-	-	11-1-7-5-7-	-1-	-3-6-3-3-1-	-3-	-	-	-	-	-	11-1-7-5-7-	-1-	-3-6-3-3-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.44	
56-44.1294-104.3367-2-15-	0-405301-08/31/77-14-	16-	-	-	-	13-1-1-5-8-	-1-	-1-6-4-4-1-	-3-	-	-	-	-	-	13-1-1-5-8-	-1-	-1-6-4-4-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.73	
56-44.1306-104.3428-2-15-	0-405302-08/31/77-14-	16-	-	-	-	8-1-1-5-8-	-1-	-1-6-4-4-1-	-3-	-	-	-	-	-	8-1-1-5-8-	-1-	-1-6-4-4-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.90	
56-44.1258-104.2908-2-15-	0-405303-08/31/77-15-	17-	-	-	-	16-1-4-5-4-	-1-	-3-4-4-4-1-	-3-	-	-	-	-	-	16-1-4-5-4-	-1-	-3-4-4-4-1-	-3-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.44	
56-44.1467-104.3936-2-15-	0-405304-08/31/77-15-	17-	-	-	-	8-1-7-5-7-	-1-	-1-4-3-3-1-	-3-	-	-	-	-	-	8-1-7-5-7-	-1-	-1-4-3-3-1-	-3-																

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

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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	LAS. 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	
56-44.1950-104.6653-2-15-	0-W05262	-5	-5	-5	33	-20	20	-5	-10	-15	3	24						
56-44.1397-104.6714-2-15-	0-W05263	-5	-5	-5	36	-20	-15	15	-10	-15	2	22						
56-44.0925-104.5997-2-15-	0-W05264	-5	-5	-5	26	-20	28	9	-10	-15	2	30						
56-44.1100-104.5911-2-15-	0-W05265	-5	-5	-5	28	-20	-15	12	-10	-15	2	29						
56-44.0631-104.5981-2-12-	0-W05266	-5	-5	-5	47	-20	61	17	-10	-15	3	40						
56-44.0325-104.5372-2-15-	0-W05267	-5	-5	-5	30	-20	16	8	-10	-15	2	36						
56-44.0500-104.5558-2-15-	0-W05268	-5	-5	-5	48	-20	27	6	-10	-15	3	34						
56-44.0475-104.5297-2-15-	0-W05269	-5	-5	-5	22	-20	-15	18	-10	-15	2	28						
56-44.0894-104.5667-2-15-	0-W05271	-5	-5	-5	17	-20	34	11	-10	-15	2	36						
56-44.1222-104.6119-2-15-	0-W05272	-5	-5	-5	29	-20	34	14	-10	-15	2	38						
56-44.2144-104.5839-2-15-	0-W05273	-5	-5	-5	29	-20	-15	18	-10	-15	2	42						
56-44.2489-104.5344-2-15-	0-W05274	-5	-5	-5	11	-20	-15	-5	-10	-15	-1	11						
56-44.2206-104.5269-2-97-	0-W05275	-5	-5	-5	21	-20	-15	11	-10	-15	1	26						
56-44.1978-104.5047-2-15-	0-W05276	-5	-5	-5	25	-20	15	16	-10	-15	2	43						
56-44.2078-104.5103-2-15-	0-W05277	-5	-5	-5	16	-20	-15	7	-10	-15	1	23						
56-44.1808-104.5567-2-15-	0-W05279	-5	-5	-5	28	-20	28	7	-10	-15	2	31						
56-44.1658-104.5672-2-15-	0-W05290	-5	-5	-5	24	-20	-15	16	-10	-15	2	43						
56-44.1661-104.5375-2-15-	0-W05291	-5	-5	-5	25	-20	28	20	-10	-15	2	41						
56-44.1661-104.5008-2-15-	0-W05292	-5	-5	-5	31	-20	-15	14	-10	-15	2	40						
56-44.1853-104.4078-2-15-	0-W05294	-5	-5	-5	14	-20	-15	-5	-10	-15	1	17						
56-44.1753-104.4378-2-15-	0-W05295	-5	-5	-5	10	-20	-15	-5	-10	-15	-1	7						
56-44.1811-104.4411-2-15-	0-W05296	-5	-5	-5	-10	-20	-15	-5	-10	-15	-1	14						
56-44.2036-104.4625-2-15-	0-W05297	-5	-5	-5	16	-20	-15	8	-10	-15	2	31						
56-44.2381-104.4297-2-15-	0-W05299	-5	-5	-5	22	-20	-15	13	-10	-15	2	62						
56-44.2197-104.3936-2-15-	0-W05299	-5	-5	-5	16	-20	-15	9	-10	-15	2	41						
56-44.2081-104.3867-2-15-	0-W05290	-5	-5	-5	11	-20	-15	10	-10	-15	2	22						
56-44.2392-104.3506-2-15-	0-W05291	-5	-5	-5	11	-20	-15	-5	-10	-15	-1	9						
56-44.1314-104.4483-2-15-	0-W05292	-5	-5	-5	18	-20	-15	13	-10	-15	1	24						
56-44.1153-104.4469-2-15-	0-W05293	-5	-5	-5	31	-20	-15	7	-10	-15	1	40						
56-44.0814-104.4761-2-15-	0-W05294	-5	-5	-5	32	-20	46	17	-10	-15	2	47						
56-44.0811-104.4867-2-15-	0-W05295	-5	-5	-5	18	-20	16	15	-10	-15	3	33						
56-44.0458-104.4831-2-15-	0-W05296	-5	-5	-5	40	-20	27	7	-10	-15	2	31						
56-44.0100-104.4275-2-15-	0-W05297	-5	-5	-5	30	-20	17	8	-10	-15	2	28						
56-44.0308-104.4214-2-15-	0-W05298	-5	-5	-5	19	-20	15	10	-10	-15	1	24						
56-44.0622-104.3819-2-15-	0-W05299	-5	-5	-5	21	-20	-15	-5	-10	-15	-1	20						
56-44.1172-104.3703-2-15-	0-W05300	-5	-5	-5	20	-20	-15	-5	-10	-15	2	26						
56-44.1294-104.3367-2-15-	0-W05301	-5	-5	-5	20	-20	-15	-5	-10	-15	1	25						
56-44.1306-104.3428-2-15-	0-W05302	-5	-5	-5	13	-20	15	6	-10	-15	2	22						
56-44.1258-104.2908-2-15-	0-W05303	-5	-5	-5	17	-20	-15	8	-10	-15	2	44						
56-44.1467-104.3936-2-15-	0-W05304	-5	-5	-5	24	-20	-15	11	-10	-15	1	24						
56-44.1473-104.7628-2-15-	0-W05305	-5	-5	-5	31	-20	27	16	-10	-15	2	48						
56-44.1247-104.7569-2-15-	0-W05306	-5	-5	-5	18	-20	-15	5	-10	-15	2	20						
56-44.1078-104.7514-2-15-	0-W05308	-5	-5	-5	14	-20	-15	-5	-10	-15	1	28						
56-44.0994-104.8175-2-15-	0-W05309	-5	-5	-5	19	-20	20	-5	-10	-15	2	22						
56-44.1069-104.8500-2-15-	0-W05310	-5	-5	-5	13	-20	21	15	-10	-15	2	34						
56-44.0597-104.8328-2-15-	0-W05312	-5	-5	-5	17	-20	27	8	-10	-15	2	25						
56-44.0583-104.7875-2-15-	0-W05313	-5	-5	-5	25	-20	-15	-5	-10	-15	1	28						
56-44.0617-104.7486-2-15-	0-W05314	-5	-5	-5	18	-20	16	11	-10	-15	2	28						
56-44.0178-104.7964-2-15-	0-W05316	-5	-5	-5	26	-20	-15	22	-10	-15	2	32						
56-44.0106-104.7925-2-15-	0-W05317	-5	-5	-5	23	-20	-15	11	-10	-15	2	28						
56-44.0236-104.8853-2-15-	0-W05318	-5	-5	-5	19	-20	-17	8	-10	-15	2	27						

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
56-44.1950-104.6653-2-15-	0-W05267	41380	-0.10	538	4738	50	-109	8.0	33	3.0	4	1.2	57680	6.8	13890	37	0.4					
56-44.1397-104.6714-2-15-	0-W05262	61500	-0.10	493	2921	54	-46	7.3	47	3.9	4	0.8	14710	5.6	11680	33	0.3					
56-44.0925-104.5997-2-15-	0-W05264	59000	-0.15	439	4787	61	-63	14.2	40	3.8	5	0.7	22830	6.7	12820	46	0.3					
56-44.1100-104.5911-2-15-	0-W05265	63500	-0.08	277	3386	100	-43	15.0	44	2.9	12	1.3	10200	9.2	11180	54	0.7					
56-44.0631-104.5981-2-12-	0-W05266	59940	-0.12	592	5938	83	-150	14.6	71	5.9	4	1.4	66860	5.3	13150	48	0.5					
56-44.0325-104.5372-2-15-	0-W05267	60390	-0.11	539	4165	63	-78	15.5	42	3.4	4	1.0	24070	4.6	12760	37	0.3					
56-44.0500-104.5558-2-15-	0-W05268	55720	-0.16	516	4108	58	-121	17.9	45	4.3	4	1.0	69390	4.4	15560	37	0.4					
56-44.0475-104.5297-2-15-	0-W05269	56940	-0.08	523	7511	60	-97	14.1	23	2.5	5	0.9	15550	6.2	10690	34	0.4					
56-44.0894-104.5667-2-15-	0-W05271	51640	-0.10	-223	9858	82	-133	12.6	51	3.4	3	1.3	44920	7.5	9338	40	0.6					
56-44.1222-104.6119-2-15-	0-W05272	57490	-0.12	539	3000	63	-78	8.0	39	3.3	4	1.0	19430	5.7	11020	25	0.3					
56-44.2144-104.5839-2-15-	0-W05273	62320	-0.13	457	2739	68	-54	13.2	59	3.6	5	1.1	21390	6.0	14140	52	0.4					
56-44.2489-104.5344-2-15-	0-W05274	20840	-0.05	187	2155	38	85	6.9	26	-0.7	4	0.8	4363	15.0	5118	21	0.3					
56-44.2206-104.5267-2-97-	0-W05275	56120	-0.10	410	2876	74	-43	5.3	49	2.5	5	1.2	13270	9.1	12670	47	0.5					
56-44.1978-104.5047-2-15-	0-W05276	59430	-0.11	334	9173	75	-43	9.0	46	3.6	7	1.3	12020	5.9	13290	40	0.5					
56-44.2078-104.5103-2-15-	0-W05277	34650	-0.10	224	20340	41	-39	9.1	37	1.9	4	0.7	9429	8.8	8786	36	0.3					
56-44.1808-104.5567-2-15-	0-W05279	56590	-0.09	416	-1031	55	-70	16.0	50	2.6	5	1.0	24400	6.0	13910	30	0.5					
56-44.1658-104.5672-2-15-	0-W05290	63760	-0.10	310	5520	59	-58	8.5	45	4.1	4	1.0	22200	7.2	16970	34	0.4					
56-44.1661-104.5375-2-15-	0-W05291	70190	-0.15	304	-729	66	-54	12.3	57	3.8	8	1.4	50670	4.3	13810	37	0.6					
56-44.1661-104.5008-2-15-	0-W05293	54840	-0.13	376	3682	61	-63	12.1	47	3.5	5	0.9	21040	8.3	12870	33	0.4					
56-44.1853-104.4078-2-15-	0-W05294	31130	-0.06	495	49460	29	-56	8.8	23	1.3	2	0.5	5916	6.1	10800	19	0.2					
56-44.1753-104.4378-2-15-	0-W05295	12040	-0.06	143	-334	41	-21	3.0	26	-0.9	3	0.9	4242	18.8	4122	26	0.4					
56-44.1811-104.4411-2-15-	0-W05296	23750	-0.09	278	17320	27	119	4.3	23	-1.0	3	0.4	4597	5.4	9624	13	0.2					
56-44.2036-104.4625-2-15-	0-W05297	49350	-0.13	326	39540	48	-54	9.5	48	3.4	3	1.0	13300	5.2	15350	40	0.3					
56-44.2381-104.4297-2-15-	0-W05298	61790	-0.10	425	45930	46	114	17.4	46	3.4	4	0.7	16010	3.5	23380	27	0.2					
56-44.2197-104.3936-2-15-	0-W05299	48130	-0.08	322	24990	47	-55	5.7	45	3.2	3	0.9	11540	8.0	16410	30	0.3					
56-44.2081-104.3867-2-15-	0-W05290	46120	-0.10	464	20560	49	-46	6.7	34	2.4	3	0.9	10680	5.5	17430	27	0.2					
56-44.2392-104.3506-2-15-	0-W05291	14980	-0.04	-82	187500	10	-49	2.4	14	-0.9	1	0.3	6326	3.0	3950	8	0.1					
56-44.1314-104.4483-2-15-	0-W05292	44690	-0.08	482	2584	50	-45	11.0	38	2.0	4	0.8	9785	8.4	10020	30	0.4					
56-44.1153-104.4469-2-15-	0-W05293	59820	-0.11	388	5575	62	-54	8.1	46	2.9	4	1.0	30170	7.6	13680	44	0.5					
56-44.0814-104.4761-2-15-	0-W05294	60300	-0.12	498	3607	85	-99	17.0	48	3.3	5	1.2	29810	6.3	10430	36	0.5					
56-44.0811-104.4867-2-15-	0-W05295	48480	-0.13	473	8068	62	-85	19.4	51	4.3	5	1.1	33860	9.1	11150	46	0.5					
56-44.0458-104.4831-2-15-	0-W05296	54010	-0.09	466	3384	46	-59	13.3	43	2.8	4	0.8	25220	5.4	10890	28	0.3					
56-44.0100-104.4275-2-15-	0-W05297	44760	-0.10	449	3293	58	-120	9.9	48	3.9	3	1.0	48250	7.2	12010	35	0.4					
56-44.0308-104.4214-2-15-	0-W05298	34590	-0.08	362	8498	52	116	6.9	29	1.6	4	0.8	12230	11.0	7055	24	0.4					
56-44.0622-104.3819-2-15-	0-W05299	32380	-0.11	362	-492	38	-33	8.0	42	-1.5	4	0.9	8248	11.0	6638	-13	0.3					
56-44.1172-104.3703-2-15-	0-W05300	45910	-0.07	498	24990	42	-53	11.7	34	1.8	4	0.7	9721	5.9	13850	29	0.3					
56-44.1294-104.3367-2-15-	0-W05301	38200	-0.11	-253	33360	38	-124	7.3	30	2.4	2	0.7	18420	4.5	13620	-18	0.4					
56-44.1306-104.3428-2-15-	0-W05302	41250	-0.10	464	20410	38	-53	6.5	35	2.4	3	0.8	9031	5.3	15190	-14	0.3					
56-44.1258-104.2908-2-15-	0-W05303	43650	-0.11	381	36700	43	-65	10.0	46	2.1	4	1.0	11820	11.0	19750	31	0.4					
56-44.1467-104.3936-2-15-	0-W05304	43040	-0.07	531	20140	40	-54	10.1	33	1.7	4	0.6	8760	5.9	13410	22	0.3					
56-44.1478-104.7628-2-15-	0-W05305	70730	-0.11	621	10220	65	-65	9.3	69	5.2	4	1.2	20730	5.2	18370	43	0.4					
56-44.1247-104.7569-2-15-	0-W05306	44820	-0.08	635	8437	57	-54	5.6	39	2.2	3	0.8	8140	6.6	16880	30	0.4					
56-44.1078-104.7514-2-15-	0-W05308	46000	-0.10	763	26520	55	-65	8.2	41	2.3	4	1.0	10020	8.8	15910	34	0.3					
56-44.0994-104.8175-2-15-	0-W05309	48530	-0.07	1720	48820	47	-92	10.8	37	2.4	3	1.0	11390	5.7	13820	26	0.2					
56-44.1069-104.8500-2-15-	0-W05310	54340	-0.09	681	14780	62	-79	6.3	50	2.3	4	1.2	14000	6.6	18360	34	0.3					
56-44.0597-104.8328-2-15-	0-W05312	46970	-0.09	956	20970	52	92	6.6	44	3.1	4	1.2	9586	5.4	17870	16	0.4					
56-44.0583-104.7875-2-15-	0-W05313	52370	-0.11	689	17770	47	-59	10.7	47	2.8	4	1.0	13020	7.7	15410	33	0.4					
56-44.0617-104.7486-2-15-	0-W05314	56440	-0.07	505	10270	49	-70	11.6	42	1.9	4	0.9	10500	5.9	16040	30	0.3					
56-44.0178-104.7964-2-15-	0-W05316	62440	-0.11	813	28490	54	-85	10.5	46	4.8	3	1.1	21970	3.3	17820	34	0.3					
56-44.0106-104.7925-2-15-	0-W05317	54240	-0.11	702	5187	63	-56	7.4	55	2.3	4	1.0	10770	5.1	16940	26	0.3					
56-44.0236-104.8853-2-15-	0-W05318	52860	-0.12	508	25130	49	-40	11.6	43	5.1	4	0.8	13300	4.5	16300	31	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
56-44.1950-104.6653-2-15-	0-405252	4875	2114	5124	40	-3	6.7	4.2	-504	-1	-1	14.1	-1116	54	5.0	122	0.514			
56-44.1397-104.6714-2-15-	0-405253	3655	291	3206	-27	-3	6.6	4.3	-209	-1	-1	10.8	2671	72	3.5	-44	0.470			
56-44.0925-104.5997-2-15-	0-405254	9829	747	3504	-41	-5	8.1	5.8	-349	-2	-2	12.5	3278	73	4.5	46	0.410			
56-44.1100-104.5911-2-15-	0-405255	6946	224	1637	38	-3	7.1	8.4	-232	-1	1	9.4	4034	78	5.8	87	0.469			
56-44.0631-104.5931-2-12-	0-405256	8331	3240	2783	-35	-4	12.3	7.1	-669	-2	-1	16.3	2930	96	4.0	180	0.452			
56-44.0325-104.5372-2-15-	0-405257	10250	1461	2007	-30	-3	7.6	4.8	-443	-1	-1	10.7	3163	75	3.5	-75	0.479			
56-44.0500-104.5558-2-15-	0-405258	12030	2730	3042	-45	-5	10.6	6.4	-637	-1	-2	10.8	2847	88	6.1	104	0.606			
56-44.0475-104.5297-2-15-	0-405259	7462	1020	8176	-19	-3	5.0	5.9	-449	-1	-1	12.0	2040	43	4.4	-51	0.610			
56-44.0894-104.5667-2-15-	0-405271	14150	2687	4304	58	-3	9.0	6.9	-582	-1	-1	11.7	2493	84	4.8	115	0.271			
56-44.1222-104.6119-2-15-	0-405272	7143	935	6987	-32	-3	5.9	6.1	-360	-1	-1	10.7	3238	71	3.8	58	0.558			
56-44.2144-104.5839-2-15-	0-405273	8845	472	3731	44	-4	10.4	4.5	-255	-1	-1	11.2	4076	89	4.5	78	0.366			
56-44.2489-104.5344-2-15-	0-405274	2933	133	927	-10	-1	2.9	3.0	-138			5.9	3054	23	2.7	-18	0.449			
56-44.2206-104.5269-2-97-	0-405275	6449	153	2751	-26	-3	8.3	6.3	-170	-1	-1	9.7	3620	65	3.6	41	0.370			
56-44.1978-104.5047-2-15-	0-405276	6860	374	2077	-30	-3	8.1	6.4	-239	-1	-1	9.4	4938	72	4.9	-47	0.391			
56-44.2078-104.5103-2-15-	0-405277	7911	274	2113	-25	-3	5.7	4.2	-179	-1	-1	5.4	2816	45	3.1	29	0.419			
56-44.1808-104.5567-2-15-	0-405279	7660	1019	3030	44	-3	7.8	4.7	-393	-1	-1	9.6	3251	91	3.3	-47	0.375			
56-44.1658-104.5672-2-15-	0-405290	12290	603	2531	48	-3	9.3	5.4	-274	-1	-1	10.7	3391	89	3.6	44	0.295			
56-44.1661-104.5375-2-15-	0-405291	12120	491	2623	-43	-5	9.2	7.9	-307	-2	-1	9.6	4424	109	3.4	94	0.352			
56-44.1661-104.5008-2-15-	0-405293	19100	694	5631	-32	-4	9.2	4.4	-314	-1	-1	11.0	4181	82	4.7	87	0.312			
56-44.1853-104.4078-2-15-	0-405294	14030	332	3828	23	-2	2.9	2.4	-236			4.5	1768	31	1.4	-18	0.524			
56-44.1753-104.4378-2-15-	0-405295	1520	101	702	-18	-2	3.5	3.3	-109	-1	-1	6.3	2575	25	3.4	-25	0.429			
56-44.1811-104.4411-2-15-	0-405296	6844	164	1531	-21	-2	2.7	2.4	-149	-1	-1	3.5	2124	24	2.1	-33	0.489			
56-44.2036-104.4625-2-15-	0-405297	30710	325	2321	57	-4	7.7	4.0	-241	-1	-1	8.6	2758	73	-2.7	69	0.347			
56-44.2381-104.4297-2-15-	0-405298	33930	505	3062	53	-3	8.0	3.6	-346	-1	-1	6.6	3799	80	4.2	-53	0.455			
56-44.2197-104.3936-2-15-	0-405299	16460	293	4459	-24	-3	6.3	3.9	-208	-1	-1	6.9	2374	51	2.9	34	0.267			
56-44.2081-104.3867-2-15-	0-405300	17260	350	3434	-26	-3	5.4	3.7	-235	-1	-1	6.3	2909	59	2.1	-79	0.314			
56-44.2392-104.3506-2-15-	0-405301	9980	149	1076	-16	-1	2.3	1.0	765	-1		2.2	888	18	-0.8	28	0.291			
56-44.1314-104.4483-2-15-	0-405302	5515	331	2436	-17	-2	5.6	3.9	-248	-1	-1	7.7	3457	55	2.5	75	0.421			
56-44.1153-104.4469-2-15-	0-405303	8085	407	3215	51	-3	8.7	4.7	-251	-2	-1	9.8	3131	85	2.9	46	0.370			
56-44.0814-104.4761-2-15-	0-405304	10440	2136	2752	-31	-4	8.8	6.8	-553	-1	-1	10.1	3318	80	3.3	-79	0.338			
56-44.0811-104.4867-2-15-	0-405305	15890	1840	2870	-35	-4	8.4	6.8	-477	-1	-1	10.8	3358	66	4.0	120	0.365			
56-44.0458-104.4831-2-15-	0-405306	8726	669	3611	33	-2	6.3	4.0	-328	-1	-1	9.5	2822	62	2.3	98	0.545			
56-44.0100-104.4275-2-15-	0-405307	8193	2099	7164	-31	-3	7.4	5.3	-526	-1	-1	11.4	2262	71	3.9	140	0.491			
56-44.0308-104.4214-2-15-	0-405308	6354	578	3326	-22	-2	4.3	4.1	-253	-1	-1	8.1	3515	48	2.7	-32	0.406			
56-44.0622-104.3819-2-15-	0-405309	3908	244	1189	-25	-3	5.5	3.1	-178	-1	-1	6.7	3049	39	3.3	-29	0.400			
56-44.1172-104.3703-2-15-	0-405310	15350	301	2764	30	-2	5.1	3.5	-252	-1	-1	6.0	3021	54	2.5	-28	0.407			
56-44.1294-104.3367-2-15-	0-405311	16090	2547	3565	-34	-3	5.2	4.0	-646	-1	-1	5.5	2041	32	-2.0	-50	0.315			
56-44.1306-104.3428-2-15-	0-405312	14650	439	3712	46	-3	4.6	3.1	-253	-1	-1	5.1	2780	47	3.1	57	0.373			
56-44.1258-104.2908-2-15-	0-405313	36360	423	7695	-26	-3	6.5	4.3	-244	-1	-1	7.5	3624	45	2.9	-40	0.325			
56-44.1467-104.3936-2-15-	0-405314	10550	379	3564	-15	-2	4.4	3.3	-259	-1	-1	6.1	2615	45	2.8	17	0.375			
56-44.1478-104.7628-2-15-	0-405315	17590	267	6688	58	-3	10.6	4.2	-233	-1	-1	9.6	3425	145	3.2	76	0.329			
56-44.1247-104.7569-2-15-	0-405316	11030	247	6155	-22	-2	4.1	3.4	-202	-1	-1	7.3	2442	46	3.0	144	0.348			
56-44.1073-104.7514-2-15-	0-405317	18070	316	9209	-24	-3	5.0	3.4	-221	-1	-1	7.9	2660	52	2.9	-38	0.327			
56-44.0994-104.8175-2-15-	0-405318	19440	1049	6793	-16	-2	5.0	3.0	-439	-1	-1	6.2	2541	48	2.4	50	0.426			
56-44.1069-104.8500-2-15-	0-405319	12500	543	8528	-27	-3	6.5	4.2	-283	-1	-1	8.5	2611	60	3.7	-42	0.348			
56-44.0597-104.8328-2-15-	0-405320	17050	461	3943	-27	-3	4.7	3.7	-252	-1	-1	7.3	2666	52	2.0	33	0.373			
56-44.0583-104.7875-2-15-	0-405321	17470	277	6943	56	-3	6.6	4.3	-224	-1	-1	7.2	3156	52	-2.1	-41	0.374			
56-44.0617-104.7486-2-15-	0-405322	11270	296	7034	37	-2	5.4	3.6	-277	-1	-1	9.7	2759	53	2.1	-52	0.265			
56-44.0178-104.7964-2-15-	0-405323	14490	1374	2660	-26	-4	8.6	5.0	-458	-2	-1	8.7	2436	83	-2.3	-46	0.463			
56-44.0106-104.7925-2-15-	0-405324	11550	264	5166	-30	-3	5.8	4.0	-227	-1	-1	7.6	3566	63	3.2	-46	0.425			
56-44.0236-104.8853-2-15-	0-405325	22490	317	1086	-35	-4	7.0	3.9	-223	-1	-1	8.1	2756	63	3.0	41	0.358			

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)	SILT/CLAY (wt.%)	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																											
56-44.0372-104.8950-2-15-	0-05310-09/26/77-9-	15-	-	-	-	27-1-1-5-1-	1-	1-4-3-3-3-	3-	-	-	-	-	-	2.92																				
56-44.0264-104.9133-2-15-	0-05320-09/26/77-10-	13-	-	-	-	16-1-1-5-1-	1-	2-4-3-3-4-	3-	-	-	-	-	-	2.57																				
56-44.0208-104.9492-2-15-	0-05321-09/26/77-10-	15-	-	-	-	8-1-1-5-7-	1-	3-4-3-2-3-	3-	-	-	-	-	-	2.77																				
56-44.0144-104.9581-2-15-	0-05322-09/26/77-10-	14-	-	-	-	19-1-1-5-7-	1-	3-4-3-2-3-	3-	-	-	-	-	-	2.77																				
56-44.0347-104.9539-2-15-	0-05324-09/26/77-11-	16-	-	-	-	19-1-1-5-7-	1-	3-4-3-2-3-	3-	-	-	-	-	-	2.64																				
56-44.0261-104.9661-2-15-	0-05325-09/26/77-11-	15-	-	-	-	8-1-1-5-1-	1-	3-4-3-3-3-	3-	-	-	-	-	-	2.79																				
56-44.0406-104.9783-2-15-	0-05326-09/26/77-12-	16-	-	-	-	16-1-1-5-1-	1-	2-4-3-2-3-	3-	-	-	-	-	-	2.91																				
56-44.0514-104.9772-2-15-	0-05327-09/26/77-12-	16-	-	-	-	11-1-1-5-1-	1-	2-4-3-2-3-	3-	-	-	-	-	-	2.64																				
56-44.0717-104.9986-2-15-	0-05328-09/26/77-12-	16-	-	-	-	13-1-1-5-7-	1-	2-4-4-3-3-	3-	-	-	-	-	-	2.66																				
56-44.0861-104.9969-2-15-	0-05329-09/26/77-12-	16-	-	-	-	19-1-1-5-7-	1-	1-4-3-2-4-	3-	-	-	-	-	-	3.36																				
56-44.0592-104.8928-2-15-	0-05330-09/26/77-14-	20-	-	-	-	5-1-1-5-7-	1-	1-4-3-3-2-	3-	-	-	-	-	-	3.15																				
56-44.1311-104.9022-2-15-	0-05333-09/26/77-16-	20-	-	-	-	5-1-1-5-1-	1-	1-4-3-3-3-	3-	-	-	-	-	-	3.01																				
56-44.1569-104.9042-2-15-	0-05336-09/26/77-17-	19-	-	-	-	13-1-1-5-8-	1-	2-4-3-2-3-	3-	-	-	-	-	-	2.82																				
56-44.1500-104.8758-2-15-	0-05336-09/26/77-18-	19-	-	-	-	13-1-7-5-9-	1-	1-4-3-2-3-	3-	-	-	-	-	-	4.61																				
56-44.1733-104.8714-2-15-	0-05337-09/26/77-18-	18-	-	-	-	11-1-1-5-1-	1-	3-4-3-3-3-	3-	-	-	-	-	-	2.62																				
56-44.1622-104.8503-2-15-	0-05338-09/26/77-18-	18-	-	-	-	22-1-1-5-8-	1-	2-4-2-3-3-	3-	-	-	-	-	-	2.54																				
56-44.0764-104.6397-2-15-	0-05340-09/27/77-15-	17-	-	-	-	11-1-1-5-8-	1-	1-4-3-2-2-	3-	-	-	-	-	-	6.17																				
56-44.0667-104.6592-2-15-	0-05341-09/27/77-16-	19-	-	-	-	5-1-1-5-8-	1-	1-4-3-2-2-	3-	-	-	-	-	-	2.88																				
56-44.0694-104.6567-2-15-	0-05342-09/27/77-17-	19-	-	-	-	13-1-1-5-6-	1-	1-4-4-2-2-	3-	-	-	-	-	-	3.55																				
56-44.0922-104.6861-2-15-	0-05343-09/27/77-17-	19-	-	-	-	13-1-1-5-6-	1-	1-4-3-2-2-	3-	-	-	-	-	-	2.77																				
56-44.0575-104.7019-2-15-	0-05345-09/28/77-9-	14-	-	-	-	13-1-1-5-6-	1-	3-4-3-2-2-	3-	-	-	-	-	-	2.65																				
56-44.0492-104.6897-2-15-	0-05347-09/28/77-10-	19-	-	-	-	16-1-1-5-6-	1-	1-4-2-2-1-	3-	-	-	-	-	-	2.85																				
56-44.0247-104.6206-2-15-	0-05353-09/28/77-14-	22-	-	-	-	16-1-1-5-6-	1-	1-4-3-2-2-	3-	-	-	-	-	-	2.67																				
56-44.1622-104.3736-2-15-	0-05355-09/31/77-16-	17-	-	-	-	11-1-7-5-6-	1-	2-4-3-3-1-	3-	-	-	-	-	-	1.98																				
56-44.2131-104.2731-2-15-	0-05357-09/31/77-18-	17-	-	-	-	5-1-1-5-8-	1-	2-4-4-3-1-	3-	-	-	-	-	-	2.55																				
56-44.2406-104.2839-2-15-	0-05358-09/31/77-19-	16-	-	-	-	13-1-4-5-4-	1-	2-4-2-4-2-	3-	-	-	-	-	-	2.35																				
56-44.2481-104.3178-2-15-	0-05359-09/31/77-20-	13-	-	-	-	8-1-1-5-6-	1-	1-3-4-3-3-	3-	-	-	-	-	-	2.51																				
56-44.2397-104.3281-2-15-	0-05360-09/31/77-20-	12-	-	-	-	27-1-4-5-4-	1-	3-4-3-3-3-	3-	-	-	-	-	-	2.33																				
56-44.2267-104.2758-2-15-	0-05362-09/01/77-8-	10-	-	-	-	5-1-7-5-6-	1-	3-4-4-3-4-	3-	-	-	-	-	-	2.24																				
56-44.0250-104.3514-2-15-	0-05365-09/01/77-17-	22-	-	-	-	16-1-1-5-6-	1-	2-1-2-4-1-	3-	-	-	-	-	-	2.90																				
56-44.0553-104.3361-2-15-	0-05367-09/02/77-8-	16-	-	-	-	13-1-1-5-6-	1-	1-4-3-4-3-	3-	-	-	-	-	-	3.00																				
56-44.0583-104.3417-2-15-	0-05368-09/02/77-8-	15-	-	-	-	5-1-1-5-6-	1-	2-3-3-4-3-	3-	-	-	-	-	-	2.40																				
56-44.0619-104.2939-2-15-	0-05370-09/02/77-10-	16-	-	-	-	11-1-1-5-6-	1-	1-1-2-4-3-	1-	-	-	-	-	-	1.49																				
56-44.0794-104.3111-2-15-	0-05371-09/02/77-10-	16-	-	-	-	11-1-1-5-6-	1-	1-4-3-4-3-	3-	-	-	-	-	-	1.73																				
56-44.0700-104.2572-2-15-	0-05373-09/02/77-12-	20-	-	-	-	13-1-4-5-4-	1-	2-1-2-4-1-	3-	-	-	-	-	-	1.35																				
56-44.0633-104.2569-2-15-	0-05374-09/02/77-12-	20-	-	-	-	5-1-4-5-4-	1-	2-4-3-4-1-	3-	-	-	-	-	-	1.91																				
56-44.0836-104.2483-2-15-	0-05375-09/02/77-13-	20-	-	-	-	11-1-1-5-6-	1-	2-4-3-4-1-	3-	-	-	-	-	-	2.57																				
56-44.0947-104.2486-2-15-	0-05376-09/02/77-14-	23-	-	-	-	11-1-4-5-4-	1-	2-1-3-4-1-	3-	-	-	-	-	-	2.11																				
56-44.1589-104.1925-2-15-	0-05379-09/02/77-16-	21-	-	-	-	11-1-1-5-6-	1-	2-4-4-3-1-	3-	-	-	-	-	-	1.45																				
56-44.1722-104.1919-2-15-	0-05380-09/02/77-16-	22-	-	-	-	8-1-1-5-6-	1-	3-4-3-3-1-	3-	-	-	-	-	-	1.59																				
56-44.1853-104.2019-2-15-	0-05381-09/02/77-17-	20-	-	-	-	8-1-1-5-6-	1-	1-4-3-3-1-	3-	-	-	-	-	-	2.69																				
56-44.1633-104.1578-2-11-	0-05382-09/02/77-18-	21-14.3-	-	-	-	5-1-1-5-6-2-	1-	1-3-3-3-1-	3-	-	-	-	-	-	2.45																				
56-44.2111-104.1819-2-11-	0-05383-09/02/77-19-	20-12.3-C-	-	-	-	5-1-1-5-8-3-	1-	1-3-3-3-1-	3-	-	-	-	-	-	2.26																				
56-44.2328-104.2050-2-11-	0-05384-09/03/77-9-	20-9.8-C-	-	-	-	5-1-1-5-6-3-	1-	4-3-3-1-1-	3-	-	-	-	-	-	2.22																				
56-44.2367-104.1619-2-15-	0-05385-09/03/77-10-	19-	-	-	-	1-1-5-6-	1-	1-1-2-3-1-	3-	-	-	-	-	-	2.18																				
56-44.2144-104.1514-2-15-	0-05386-09/11/77-13-	22-	-	-	-	8-1-1-5-6-	1-	1-1-2-3-1-	3-	-	-	-	-	-	2.88																				
56-44.1847-104.1256-2-11-	0-05387-09/11/77-15-	23-8.3-	-	-	-	5-1-1-5-6-3-3-1-	1-	1-2-3-1-	3-	-	-	-	-	-	1.82																				
56-44.1714-104.0936-2-11-	0-05388-09/11/77-15-	22-7.0-	-	-	-	10-1-1-5-6-3-3-1-	1-	1-3-3-1-	3-	-	-	-	-	-	1.87																				
56-44.2044-104.0592-2-11-	0-05389-09/11/77-17-	16-10.5-C-	-	-	-	12-1-1-5-7-3-3-1-	1-	1-2-3-2-	3-	-	-	-	-	-	1.91																				
56-44.2064-104.0786-2-11-	0-05390-09/11/77-18-	16-10.2-C-	-	-	-	17-1-1-5-6-3-3-1-	1-	1-2-4-2-	3-	-	-	-	-	-	2.19																				
56-44.2189-104.0775-2-11-	0-05391-09/11/77-19-	15-	-	-	-	10-1-1-5-1-3-3-1-	1-	1-2-3-2-	3-	-	-	-	-	-	1.70																				

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

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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	
56-44.0372-104.8950-2-15-						0-W05310	-5	-5	-5	22	-20	-15	12	-10	-15	2	26	
56-44.0264-104.9133-2-15-						0-W05320	-5	-5	-5	29	-20	-15	12	-10	-15	2	26	
56-44.0208-104.9492-2-15-						0-W05321	-5	-5	-5	25	-20	-15	12	-10	-15	2	33	
56-44.0144-104.9581-2-15-						0-W05322	-5	-5	-5	21	-20	-15	7	-10	-15	2	23	
56-44.0347-104.9539-2-15-						0-W05324	-5	-5	-5	28	-20	19	7	-10	-15	2	26	
56-44.0261-104.9661-2-15-						0-W05325	-5	-5	-5	20	-20	20	10	-10	-15	2	20	
56-44.0406-104.9783-2-15-						0-W05326	-5	-5	-5	23	-20	-15	10	-10	-15	2	38	
56-44.0614-104.9772-2-15-						0-W05327	-5	-5	-5	20	-20	18	12	-10	-15	2	31	
56-44.0717-104.9986-2-15-						0-W05328	-5	-5	-5	12	-20	-15	8	-10	-15	2	26	
56-44.0861-104.9969-2-15-						0-W05329	-5	-5	-5	32	-20	23	15	-10	-15	3	41	
56-44.0692-104.8928-2-15-						0-W05330	-5	-5	-5	18	-20	18	18	-10	-15	3	33	
56-44.1311-104.9022-2-15-						0-W05333	-5	-5	-5	25	-20	17	12	-10	-15	2	39	
56-44.1569-104.9042-2-15-						0-W05335	-5	-5	-5	18	-20	-15	7	-10	-15	2	29	
56-44.1500-104.8758-2-15-						0-W05336	-5	-5	-5	21	-20	-15	17	-10	-15	2	32	
56-44.1733-104.8714-2-15-						0-W05337	-5	-5	-5	21	-20	-15	9	-10	-15	2	42	
56-44.1622-104.8503-2-15-						0-W05338	-5	-5	-5	12	-20	-15	-5	-10	-15	2	29	
56-44.0764-104.8397-2-15-						0-W05340	-5	-5	-5	27	-20	32	14	-10	-15	3	34	
56-44.0607-104.6692-2-15-						0-W05341	-5	-5	-5	21	-20	16	6	-10	-15	2	45	
56-44.0694-104.6567-2-15-						0-W05342	-5	-5	-5	18	-20	20	78	-10	-15	2	35	
56-44.0922-104.6861-2-15-						0-W05343	-5	-5	-5	25	-20	-15	6	-10	-15	3	55	
56-44.0575-104.7019-2-15-						0-W05345	-5	-5	-5	17	-20	-15	13	-10	-15	2	36	
56-44.0492-104.6897-2-15-						0-W05347	-5	-5	-5	13	-20	-15	7	-10	-15	2	38	
56-44.0247-104.6206-2-15-						0-W05352	-5	-5	-5	14	-20	17	8	-10	-15	2	41	
56-44.1622-104.3736-2-15-						0-W05355	-5	-5	-5	16	-20	-15	11	-10	-15	2	22	
56-44.2131-104.2731-2-15-						0-W05357	-5	-5	-5	23	-20	-15	5	-10	-15	2	39	
56-44.2406-104.2839-2-15-						0-W05358	-5	-5	-5	10	-20	-15	-5	-10	-15	1	33	
56-44.2481-104.3178-2-15-						0-W05359	-5	-5	-5	-10	-20	-15	-5	-10	-15	1	26	
56-44.2397-104.3281-2-15-						0-W05360	-5	-5	-5	33	-20	-15	6	-10	-15	1	38	
56-44.2267-104.2758-2-15-						0-W05362	-5	-5	-5	21	-20	17	7	-10	-15	2	25	
56-44.0250-104.3514-2-15-						0-W05365	-5	-5	-5	25	-20	-15	10	-10	-15	2	21	
56-44.0553-104.3361-2-15-						0-W05367	-5	-5	-5	20	-20	-15	10	-10	-15	1	20	
56-44.0583-104.3417-2-15-						0-W05368	-5	-5	-5	17	-20	-15	-5	-10	-15	2	22	
56-44.0619-104.2939-2-15-						0-W05370	-5	-5	6	17	-20	-15	-5	-10	-15	2	27	
56-44.0794-104.3111-2-15-						0-W05371	-5	-5	-5	21	-20	-15	9	-10	-15	2	27	
56-44.0700-104.2572-2-15-						0-W05372	-5	-5	-5	16	-20	18	-5	-10	-15	-1	14	
56-44.0633-104.2669-2-15-						0-W05374	-5	-5	-5	22	-20	-15	9	-10	-15	2	47	
56-44.0936-104.2483-2-15-						0-W05375	-5	-5	-5	22	-20	-15	6	-10	-15	2	61	
56-44.0947-104.2485-2-15-						0-W05376	-5	-5	-5	17	-20	-15	9	-10	-15	2	63	
56-44.1589-104.1925-2-15-						0-W05379	-5	-5	-5	11	-20	-15	5	-10	-15	1	16	
56-44.1722-104.1919-2-15-						0-W05380	-5	-5	-5	23	-20	-15	9	-10	-15	1	17	
56-44.1853-104.2019-2-15-						0-W05381	-5	-5	-5	22	-20	15	6	-10	-15	2	40	
56-44.1633-104.1578-2-11-						0-W05382	-5	-5	-5	22	-20	21	14	-10	-15	1	27	
56-44.2111-104.1819-2-11-						0-W05383	-5	-5	-5	25	-20	-15	-5	-10	-15	1	16	
56-44.2328-104.2050-2-11-						0-W05384	-5	-5	-5	24	-20	-15	12	-10	-15	-1	17	
56-44.2367-104.1619-2-15-						0-W05385	-5	-5	-5	25	-20	-15	10	-10	-15	1	15	
56-44.2144-104.1514-2-15-						0-W05386	-5	-5	-5	17	-20	18	12	-10	-15	1	27	
56-44.1847-104.1256-2-11-						0-W05387	-5	-5	-5	24	-20	-15	49	83	-15	-1	12	
56-44.1714-104.0936-2-11-						0-W05388	-5	-5	-5	24	-20	-15	7	-10	-15	1	27	
56-44.2044-104.0592-2-11-						0-W05389	-5	-5	-5	18	-20	15	-5	-10	-15	-1	19	
56-44.2064-104.0786-2-11-						0-W05390	-5	-5	-5	16	-20	-15	8	-10	-15	2	28	
56-44.2189-104.0775-2-11-						0-W05391	-5	-5	-5	18	-20	-15	-5	-10	-15	-1	13	

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

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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
56-44.0372-104.8950-2-15-					0-405319	43870	-0.07	554	22230	52	-53	11.0	40	3.3	4	0.7	9271	5.4	16990	26	0.3	
56-44.0264-104.9133-2-15-					0-405320	55960	-0.09	514	7910	55	-42	6.2	48	4.2	3	1.0	12730	6.6	17450	36	0.3	
56-44.0208-104.9492-2-15-					0-405321	56610	-0.11	540	8868	58	-48	7.7	50	3.5	4	0.9	11490	6.0	18240	33	0.3	
56-44.0144-104.9581-2-15-					0-405322	50930	-0.11	579	9658	54	-45	10.8	43	4.0	4	0.9	12080	7.4	17110	37	0.4	
56-44.0347-104.9539-2-15-					0-405324	49520	-0.07	495	2235	49	-52	9.6	38	2.9	4	0.7	9124	6.2	17060	27	0.3	
56-44.0261-104.9661-2-15-					0-405325	51790	-0.08	514	8048	58	-47	5.4	43	3.2	3	1.1	11470	7.0	17400	35	0.4	
56-44.0406-104.9783-2-15-					0-405326	52440	-0.11	612	12970	65	-46	7.6	40	4.4	4	0.9	11740	5.0	17790	33	0.4	
56-44.0614-104.9772-2-15-					0-405327	46780	-0.11	584	11350	42	-45	10.0	31	4.7	4	0.8	10960	5.7	16960	39	0.3	
56-44.0717-104.9886-2-15-					0-405328	49410	-0.06	539	5081	48	-54	9.9	31	2.8	4	0.7	8958	8.5	14920	33	0.3	
56-44.0861-104.9969-2-15-					0-405329	91300	-0.12	448	14680	74	-44	8.0	67	7.6	4	1.0	20990	2.9	23850	35	0.3	
56-44.0692-104.8928-2-15-					0-405330	68180	-0.12	598	20140	57	-52	8.0	59	3.6	4	1.1	13500	4.1	19630	30	0.3	
56-44.1311-104.9022-2-15-					0-405333	65400	-0.15	609	12900	64	-49	9.5	70	6.9	4	1.5	23720	5.8	18680	-18	-0.2	
56-44.1569-104.9042-2-15-					0-405335	52550	-0.07	562	9732	51	-60	10.0	32	2.5	4	0.8	9649	6.8	15860	27	0.3	
56-44.1500-104.8758-2-15-					0-405336	52290	-0.08	481	37700	41	-81	12.6	41	2.8	3	0.8	12310	4.1	12710	23	0.2	
56-44.1733-104.8714-2-15-					0-405337	56230	-0.11	392	22400	61	-68	5.7	51	3.0	3	0.9	13720	6.9	17320	34	0.3	
56-44.1622-104.8503-2-15-					0-405338	50670	-0.14	524	12630	64	-58	5.4	42	3.2	3	1.3	15400	8.1	16300	34	0.3	
56-44.0764-104.6397-2-15-					0-405340	65690	-0.19	569	6025	75	-61	25.3	73	7.7	5	1.8	35860	5.7	17110	58	0.5	
56-44.0667-104.6692-2-15-					0-405341	59820	-0.09	743	13050	53	-78	13.6	47	2.8	4	0.9	12920	4.6	15210	30	0.4	
56-44.0694-104.6567-2-15-					0-405342	44280	-0.12	696	40920	48	155	5.7	45	3.2	3	1.2	13860	6.4	14680	38	0.3	
56-44.0922-104.6861-2-15-					0-405343	57230	-0.17	702	10810	57	-68	9.3	56	4.7	3	1.5	23680	5.7	15660	30	-0.2	
56-44.0575-104.7019-2-15-					0-405345	59860	-0.18	581	7538	55	-63	10.2	60	5.4	4	1.2	24650	6.6	17950	35	0.8	
56-44.0492-104.6897-2-15-					0-405347	59870	-0.19	645	5722	56	-65	11.9	50	3.7	4	0.8	14250	5.5	18680	38	0.3	
56-44.0247-104.6206-2-15-					0-405352	52450	-0.12	640	11940	57	-66	6.0	40	3.2	3	1.2	12410	7.1	15860	36	0.5	
56-44.1622-104.3736-2-15-					0-405355	41810	-0.16	1143	25520	49	-50	9.1	34	3.5	3	1.7	18300	8.3	13770	-23	0.4	
56-44.2131-104.2731-2-15-					0-405357	43550	-0.19	443	47980	59	-67	9.3	71	-3.2	4	1.1	17950	10.7	15580	-27	-0.3	
56-44.2406-104.2839-2-15-					0-405358	33410	-0.07	307	98720	38	-67	9.9	46	1.2	4	0.7	8122	7.5	16140	21	0.4	
56-44.2481-104.3178-2-15-					0-405359	39950	-0.14	368	74320	51	-70	6.1	58	-2.0	3	0.7	9639	8.9	14020	25	0.3	
56-44.2397-104.3281-2-15-					0-405360	44440	-0.15	508	7967	57	-66	8.1	48	3.0	4	1.8	17560	12.5	15890	-21	0.3	
56-44.2267-104.2758-2-15-					0-405362	35270	-0.20	486	38090	41	-61	5.2	45	-3.3	3	-0.7	14040	11.8	14030	-29	0.3	
56-44.0250-104.3514-2-15-					0-405365	41420	-0.08	305	5726	39	-43	11.1	32	1.7	4	0.7	6963	6.4	9254	23	0.4	
56-44.0553-104.3361-2-15-					0-405367	45580	-0.14	251	8052	51	-52	6.9	35	4.1	4	0.8	10680	6.7	13110	33	0.4	
56-44.0583-104.3417-2-15-					0-405368	43650	-0.17	440	25600	47	-49	7.3	44	3.5	4	1.3	18250	7.2	12740	-25	0.2	
56-44.0619-104.2939-2-15-					0-405370	36750	-0.14	428	29400	29	-60	7.4	32	-2.4	3	1.2	12080	6.6	15350	-20	0.2	
56-44.0794-104.3111-2-15-					0-405371	38310	-0.07	379	6376	32	-62	9.2	27	1.3	3	0.7	7131	5.1	15470	17	0.3	
56-44.0700-104.2572-2-15-					0-405373	24960	-0.12	178	155300	20	-61	5.0	35	-1.7	2	0.6	6745	3.3	9868	-22	-0.2	
56-44.0633-104.2669-2-15-					0-405374	44400	-0.15	409	42970	48	-67	8.0	46	2.9	3	1.4	17130	5.6	19500	-22	0.6	
56-44.0836-104.2483-2-15-					0-405375	47640	-0.17	458	39220	49	-66	10.8	54	4.6	4	1.4	21850	7.8	16800	36	-0.3	
56-44.0947-104.2486-2-15-					0-405376	47560	-0.08	378	34860	40	-74	11.5	36	2.1	4	0.8	12010	4.8	22280	28	0.4	
56-44.1589-104.1925-2-15-					0-405379	25050	-0.09	318	10080	22	-36	3.4	27	-1.3	2	0.5	5882	6.4	11930	20	0.2	
56-44.1722-104.1919-2-15-					0-405380	26990	-0.14	376	3306	34	-47	5.5	-16	-2.2	2	1.3	7859	4.7	13310	-20	-0.2	
56-44.1853-104.2019-2-15-					0-405381	47370	-0.18	622	7684	48	-65	9.8	69	3.6	4	1.5	20360	11.0	17590	43	-0.3	
56-44.1633-104.1578-2-11-					0-405382	44120	-0.09	649	28010	41	-68	12.9	34	2.2	4	0.9	9742	7.1	16650	33	0.4	
56-44.2111-104.1819-2-11-					0-405383	37870	-0.13	505	68130	48	81	5.6	44	2.4	3	0.8	9665	7.5	12730	43	0.3	
56-44.2328-104.2050-2-11-					0-405384	35530	-0.17	560	41840	50	-60	6.0	50	-2.9	3	1.4	10690	13.1	14490	-26	-0.3	
56-44.2367-104.1519-2-15-					0-405385	34970	-0.19	411	6517	34	-51	8.1	46	-3.2	3	-0.8	13550	8.4	16610	-24	-0.3	
56-44.2144-104.1514-2-15-					0-405386	39790	-0.08	482	6327	39	-67	12.4	37	2.0	3	0.7	9044	7.2	15040	26	0.2	
56-44.1847-104.1256-2-11-					0-405387	21930	-0.11	231	43660	27	-39	4.2	37	-1.8	2	0.6	7737	12.2	11070	-20	0.3	
56-44.1714-104.0936-2-11-					0-405388	30420	-0.18	364	32210	31	-44	4.1	45	-3.2	2	-0.7	11080	8.6	14130	-26	-0.3	
56-44.2044-104.0592-2-11-					0-405389	27460	-0.15	399	50970	30	80	4.9	27	3.1	2	1.1	11130	10.8	12960	-20	-0.2	
56-44.2064-104.0786-2-11-					0-405390	34260	-0.08	409	19280	29	145	11.4	31	2.3	3	0.5	6911	6.1	17330	16	0.3	
56-44.2189-104.0775-2-11-					0-405391	19630	-0.09	392	22480	22	-28	2.6	26	-1.4	1	0.4	3357	7.0	12020	-17	-0.1	

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		
56-44.0372-104.8950-2-15-	0-W05319	19720	381	2262	34	-2	5.1	3.8	-274	-1	-1	7.8	2645	54	2.3	-37	0.374						
56-44.0264-104.9133-2-15-	0-W05320	11470	251	2231	44	-3	6.7	4.3	-192	-1	-1	9.6	2481	61	3.9	79	0.266						
56-44.0208-104.9492-2-15-	0-W05321	16040	318	2661	-31	-3	5.1	4.6	-233	-1	-1	9.3	3031	62	4.0	-50	0.298						
56-44.0144-104.9581-2-15-	0-W05322	12020	276	2056	-29	-3	6.7	3.9	-199	-2	-1	7.5	2798	53	-2.3	-42	0.369						
56-44.0347-104.9539-2-15-	0-W05324	8197	271	2431	35	-2	4.9	3.4	-232	-1	-1	7.4	2607	53	2.9	93	0.357						
56-44.0261-104.9661-2-15-	0-W05325	12750	263	2534	-24	-2	6.1	4.1	-190	-1	-1	8.5	2253	55	3.8	-56	0.328						
56-44.0406-104.9783-2-15-	0-W05326	13590	284	2838	44	-3	6.3	4.6	-228	-1	-1	9.7	2965	65	2.6	64	0.300						
56-44.0614-104.9772-2-15-	0-W05327	15810	232	3463	-27	-3	5.6	3.7	-195	-1	-1	6.6	2269	48	-2.1	-44	0.400						
56-44.0717-104.9986-2-15-	0-W05328	9683	208	2845	35	-2	4.5	3.9	-240	-1	-1	7.4	2736	48	3.3	50	0.359						
56-44.0861-104.9969-2-15-	0-W05329	22810	345	1156	98	-4	11.6	4.8	-248	-1	-1	11.8	3154	94	3.5	114	0.285						
56-44.0692-104.8928-2-15-	0-W05330	20600	354	3004	-32	-3	7.1	4.2	-256	-1	-1	10.0	3447	81	3.5	52	0.315						
56-44.1311-104.9022-2-15-	0-W05333	21320	290	2854	-53	-4	9.7	5.9	-230	-2	-2	10.5	3118	81	-3.1	68	0.287						
56-44.1569-104.9042-2-15-	0-W05335	12330	254	5429	36	-2	4.9	4.6	-237	-1	-1	7.5	3009	54	2.4	-24	0.376						
56-44.1500-104.8758-2-15-	0-W05336	17480	905	6454	-21	-3	5.4	4.3	-388	-1	-1	7.5	1832	53	-1.9	56	0.615						
56-44.1733-104.8714-2-15-	0-W05337	23610	267	8205	-38	-3	6.7	4.1	-211	-2	-1	9.4	2531	53	4.4	45	0.279						
56-44.1622-104.8503-2-15-	0-W05338	11850	271	6634	-63	-3	5.7	3.8	-211	-3	-1	9.1	2706	51	-3.3	-28	0.279						
56-44.0764-104.6397-2-15-	0-W05340	11890	774	2734	79	-4	12.0	5.4	-322	-3	-2	14.7	3295	114	-5.0	-154	0.420						
56-44.0667-104.6592-2-15-	0-W05341	14870	256	8422	41	-3	6.6	3.5	-276	-1	-1	8.3	2925	98	2.3	45	0.347						
56-44.0694-104.6567-2-15-	0-W05342	15870	461	8184	-38	-3	5.4	4.2	-253	-2	-1	10.0	2260	71	3.4	138	0.355						
56-44.0922-104.6861-2-15-	0-W05343	14110	275	9096	-72	-4	8.0	5.0	-239	-3	-2	8.1	3022	98	-3.4	-102	0.342						
56-44.0575-104.7019-2-15-	0-W05345	14440	384	6637	-65	-4	9.1	5.2	-254	-3	-2	10.2	2887	70	-3.5	-60	0.260						
56-44.0492-104.6897-2-15-	0-W05347	15900	348	5719	39	-3	6.8	4.1	-272	-1	-1	9.3	3060	77	3.5	69	0.306						
56-44.0247-104.6206-2-15-	0-W05352	14260	190	9344	-41	-4	6.2	3.9	-205	-2	1	8.4	2671	63	3.1	-67	0.318						
56-44.1622-104.3736-2-15-	0-W05355	13730	434	3082	-67	-4	6.3	4.1	-245	-3	-1	7.7	3062	54	-3.3	-100	0.257						
56-44.2131-104.2731-2-15-	0-W05357	17400	467	5573	-71	-4	7.6	3.4	-274	-4	-2	9.0	3599	49	-4.0	-98	0.283						
56-44.2406-104.2839-2-15-	0-W05358	19550	332	5097	29	-2	4.5	2.9	-250	-1	-1	5.8	2705	46	2.6	-13	0.405						
56-44.2481-104.3178-2-15-	0-W05359	15040	225	6552	-47	-4	5.1	3.0	-224	-2	-1	7.6	2600	46	-3.2	-75	0.330						
56-44.2397-104.3281-2-15-	0-W05360	13040	434	7966	-61	-3	5.6	4.6	-256	-3	-1	7.5	2826	49	4.6	-75	0.311						
56-44.2267-104.2758-2-15-	0-W05362	13150	188	5224	-72	-4	5.4	3.4	-213	-4	-2	7.5	2693	43	-4.3	120	0.299						
56-44.0250-104.3514-2-15-	0-W05365	6262	244	1858	-20	-2	5.5	3.8	-231	-1	-1	6.9	2934	43	2.9	22	0.420						
56-44.0553-104.3361-2-15-	0-W05367	8271	421	2302	-51	-4	7.0	3.8	-264	-2	-1	7.0	2864	45	5.1	-77	0.429						
56-44.0583-104.3417-2-15-	0-W05368	15730	393	2533	-72	-4	7.3	3.9	-243	-3	-2	9.0	3425	55	5.8	-105	0.267						
56-44.0619-104.2939-2-15-	0-W05370	20350	319	7022	-52	-3	4.9	2.6	-217	-3	-1	4.2	1901	33	-2.9	-38	0.355						
56-44.0794-104.3111-2-15-	0-W05371	10320	383	5132	32	-2	3.8	2.4	-272	-1	-1	3.9	1941	33	2.3	25	0.444						
56-44.0700-104.2572-2-15-	0-W05373	22650	201	3016	-42	-3	3.6	2.1	1113	-2	-1	2.9	1624	26	-2.4	-67	0.466						
56-44.0633-104.2669-2-15-	0-W05374	37070	398	7167	-64	-3	6.7	5.1	-256	-3	-1	6.7	2832	53	-2.9	-94	0.285						
56-44.0836-104.2483-2-15-	0-W05375	29870	400	6975	-62	-4	8.2	3.4	-256	-3	-2	8.0	3271	57	3.3	-84	0.321						
56-44.0947-104.2486-2-15-	0-W05376	40190	466	7078	49	-2	6.1	3.1	-309	-1	-1	6.3	3071	53	3.1	-46	0.335						
56-44.1589-104.1925-2-15-	0-W05379	6506	197	2202	-31	-3	2.9	1.7	-153	-2	-1	4.1	1478	26	-1.7	-48	0.354						
56-44.1722-104.1919-2-15-	0-W05380	4891	351	3442	-58	-3	3.1	2.2	-213	-3	-1	5.2	1981	25	-2.9	-85	0.306						
56-44.1853-104.2019-2-15-	0-W05381	9606	515	5427	-64	-4	7.8	3.7	-276	-4	-2	8.5	3291	53	-3.8	-92	0.316						
56-44.1633-104.1578-2-11-	0-W05382	9567	367	4976	47	-3	5.1	3.5	-293	-1	-1	7.3	3161	55	3.8	-29	0.336						
56-44.2111-104.1819-2-11-	0-W05383	7348	333	5678	-46	-4	5.1	4.0	-253	-2	-1	7.5	2488	48	-2.8	-34	0.301						
56-44.2328-104.2050-2-11-	0-W05384	6397	171	5816	-74	-4	4.6	3.2	-207	-3	-2	7.8	2716	39	-3.6	-115	0.285						
56-44.2367-104.1619-2-15-	0-W05385	6553	429	3157	-73	-4	5.3	3.1	-254	-4	-2	7.8	2631	42	-4.1	-109	0.279						
56-44.2144-104.1514-2-15-	0-W05386	-3081	539	4571	-21	-2	4.4	3.0	511	-1	-1	5.5	2900	64	3.5	88	0.524						
56-44.1847-104.1256-2-11-	0-W05387	4127	84	2204	-43	-3	2.9	1.8	-142	-2	-1	3.9	1646	30	-2.2	-66	0.467						
56-44.1714-104.0936-2-11-	0-W05388	4807	155	2324	-82	-4	4.1	3.1	258	-4	-2	5.2	2131	31	-3.9	-123	0.360						
56-44.2044-104.0592-2-11-	0-W05389	14800	213	2530	-60	-3	4.5	2.5	-173	-3	-1	6.2	2123	37	-3.0	-87	0.308						
56-44.2064-104.0786-2-11-	0-W05390	9388	320	4218	56	-2	3.6	1.9	-273	-1	-1	4.6	2860	33	1.5	-32	0.476						
56-44.2189-104.0775-2-11-	0-W05391	3083	74	968	-34	-3	2.1	1.1	-107	-1	-1	3.0	1295	16	-1.9	-55	0.567						

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

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

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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	LAS 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
56-44.2492	-104.1106	-2-11-	Q-W05392				-5	-5	-5	21	-20	-15	-5	-10	-15	-1	17
56-44.2325	-104.0600	-2-11-	Q-W05393				-5	-5	-5	29	-20	-15	15	-10	15	2	26
56-44.2483	-104.0597	-2-11-	Q-W05394				-5	-5	-5	24	-20	21	-5	-10	-15	1	25
46-44.2289	-104.0192	-2-11-	Q-W05395				-5	-5	-5	21	-20	-15	-5	-10	-15	1	11
46-44.2289	-104.0033	-2-11-	Q-W05396				-5	-5	-5	10	-20	15	9	-10	-15	2	25
46-44.1419	-104.0469	-2-11-	Q-W05398				-5	-5	-5	20	-20	-15	7	-10	-15	1	13
46-44.1523	-104.0228	-2-12-	Q-W05399				-5	-5	-5	15	-20	-15	-5	-10	-15	2	22
46-44.1556	-104.0106	-2-15-	Q-W05400				-5	-5	-5	17	-20	-15	12	-10	-15	2	26
46-44.1222	-104.0156	-2-11-	Q-W05401				-5	-5	-5	21	-20	24	6	-10	-15	2	16
46-44.0700	-104.0292	-2-11-	Q-W05402				-5	-5	-5	19	-20	-15	7	-10	-15	2	22
56-44.1181	-104.0553	-2-11-	Q-W05403				-5	-5	-5	20	-20	-15	12	-10	-15	1	15
56-44.0872	-104.0625	-2-15-	Q-W05404				-5	-5	-5	15	-20	20	7	-10	-15	2	16
56-44.0814	-104.0544	-2-12-	Q-W05405				-5	-5	-5	32	-20	27	17	-10	-15	2	29
56-44.1464	-104.1017	-2-11-	Q-W05406				-5	-5	-5	15	-20	-15	-5	-10	-15	1	16
56-44.1272	-104.0850	-2-11-	Q-W05407				-5	-5	-5	12	-20	-15	5	-10	-15	1	17
56-44.1311	-104.1381	-2-15-	Q-W05408				-5	-5	-5	20	-20	15	17	-10	-15	1	16
56-44.0969	-104.1575	-2-15-	Q-W05409				-5	-5	-5	19	-20	16	7	-10	-15	2	33
46-44.0358	-104.0108	-2-15-	Q-W05410				12	6	-5	25	-20	-15	-5	-10	-15	2	29
46-44.0178	-104.0128	-2-15-	Q-W05411				-5	-5	-5	16	-20	-15	-5	-10	-15	2	39
56-44.0236	-104.0931	-2-15-	Q-W05412				-5	-5	-5	23	-20	24	11	-10	-15	2	61
56-44.0197	-104.0989	-2-16-	Q-W05413				-5	-5	-5	22	-20	-15	9	-10	-15	2	72
56-44.0197	-104.0753	-2-15-	Q-W05414				-5	-5	-5	25	-20	-15	10	-10	-15	2	25
56-44.0467	-104.2208	-2-11-	Q-W05415				-5	-5	-5	16	-20	-15	-5	-10	-15	1	17
56-44.0108	-104.2097	-2-12-	Q-W05416				-5	-5	-5	28	-20	-15	-5	-10	-15	1	23
56-44.0144	-104.1725	-2-12-	Q-W05417				-5	-5	-5	11	-20	-15	-5	-10	-15	2	49
56-44.0122	-104.1306	-2-15-	Q-W05418				-5	-5	-5	22	-20	21	5	-10	-15	2	45
56-44.0019	-104.1758	-2-15-	Q-W05419				-5	-5	-5	17	-20	-15	-5	-10	-15	1	12

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

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DOE SAMPLE NUMBER						DOE SAMPLE LOCATION NUMBER	ELEMENTAL CONCENTRATIONS DETERMINED BY NEUTRON ACTIVATION ANALYSIS															
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE		Concentrations reported in weight parts per million (ppm)															
							Al	Au	Ba	Ca	Ce	Cl	Co	Cr	Cs	Dy	Eu	Fe	Hf	K	La	Lu
56-44.2442-104.1106-2-11-						0-405322	16240	-0.03	317	79460	20	-34	1.2	28	1.4	2	0.5	4642	6.4	11780	10	0.1
56-44.2325-104.0600-2-11-						0-405323	42050	-0.19	594	5101	52	-61	11.1	51	-3.4	3	1.4	18940	10.2	16700	-25	0.3
56-44.2483-104.0597-2-11-						0-405324	32880	-0.08	481	18700	36	-57	10.7	34	1.7	3	0.6	6293	7.5	15270	22	0.2
46-44.2289-104.0192-2-11-						0-405325	19460	-0.11	221	31390	27	69	3.8	32	-1.7	2	0.5	4747	10.5	10150	-19	0.3
46-44.2289-104.0033-2-11-						0-405326	38540	-0.17	478	10290	43	80	5.1	45	4.4	3	1.2	14810	10.6	14030	-25	-0.3
46-44.1419-104.0469-2-11-						0-405328	26060	-0.23	463	25050	30	194	6.2	-30	-3.9	3	-1.0	9789	6.4	14810	-34	-0.4
46-44.1528-104.0228-2-12-						0-405329	40630	-0.10	487	49420	45	-84	13.1	43	1.8	4	0.8	7194	8.4	13890	23	0.4
46-44.1556-104.0106-2-15-						0-405400	50790	-0.13	367	10250	61	-73	7.6	56	3.4	3	1.2	14650	9.5	15460	34	0.5
46-44.1222-104.0156-2-11-						0-405401	38680	-0.21	608	30460	47	131	8.6	34	-3.8	3	1.8	15360	9.5	11320	-31	0.4
46-44.0700-104.0292-2-11-						0-405402	39300	-0.19	463	23090	54	97	12.8	52	-3.4	3	1.5	18850	10.9	12610	-26	-0.3
56-44.1181-104.0553-2-11-						0-405403	33500	-0.17	346	125700	40	196	6.0	39	-2.7	3	0.8	8472	6.2	16780	-30	0.3
56-44.0872-104.0625-2-15-						0-405404	30350	-0.15	452	10900	28	-46	5.9	31	-2.6	2	0.8	10990	9.2	12990	-20	0.3
56-44.0814-104.0544-2-12-						0-405405	42410	-0.20	635	12740	46	-57	6.5	72	-3.5	4	1.6	16820	10.0	15030	-27	-0.3
56-44.1464-104.1017-2-11-						0-405406	30450	-0.07	444	12790	33	157	9.4	32	1.7	3	0.6	5133	9.1	14590	18	0.3
56-44.1272-104.0850-2-11-						0-405407	29460	-0.11	354	4397	29	-50	4.8	30	-1.7	2	0.3	5844	9.3	14110	-20	0.4
56-44.1311-104.1381-2-15-						0-405408	33780	-0.29	537	17690	34	-66	6.7	-37	-5.1	2	-1.2	13280	6.7	12940	-43	-0.5
56-44.0969-104.1575-2-15-						0-405409	46260	-0.18	558	30020	66	-59	8.5	72	4.1	4	1.5	20990	11.2	18690	-24	0.4
46-44.0358-104.0108-2-15-						0-405410	50050	-0.10	661	11210	51	-76	13.2	45	3.5	4	0.8	11370	5.7	19100	25	0.4
46-44.0178-104.0128-2-15-						0-405411	22440	-0.10	342	6484	23	-41	3.5	25	1.4	2	0.5	5207	10.3	12830	25	0.3
56-44.0236-104.0931-2-15-						0-405412	47600	-0.17	577	35520	63	-61	8.7	46	5.0	4	1.6	19740	9.4	16970	41	0.7
56-44.0197-104.0989-2-15-						0-405413	48740	-0.20	432	22110	57	-66	11.0	52	4.2	4	1.3	20730	9.8	18080	-26	-0.3
56-44.0197-104.0758-2-15-						0-405414	42130	-0.09	606	9485	42	-71	12.2	47	2.3	3	0.7	9231	7.1	13930	28	0.2
56-44.0467-104.2208-2-11-						0-405415	27960	-0.10	327	43110	28	-52	4.3	20	-1.5	2	0.7	4735	4.8	14630	-17	-0.1
56-44.0108-104.2097-2-12-						0-405416	40210	-0.16	437	22880	49	119	7.4	43	-2.9	4	1.5	13820	7.3	18300	23	0.7
56-44.0144-104.1725-2-12-						0-405417	40130	-0.19	434	60320	44	-67	7.9	-25	-3.3	4	1.2	18310	10.0	17020	27	0.4
56-44.0122-104.1306-2-15-						0-405418	42700	-0.08	324	45170	44	-79	11.7	44	2.3	4	0.7	10790	7.8	17690	23	0.3
56-44.0019-104.1758-2-15-						0-405419	41060	-0.11	349	58860	41	105	6.0	38	2.4	4	0.7	11680	11.1	16620	19	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	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
56-44.2492-104.1106-2-11-	0-W05302	2069	54	1112	23	-1	2.2	1.3	152	-1		2.7	1323	14	1.6	53	0.456					
56-44.2325-104.0600-2-11-	0-W05303	7434	531	5135	-73	-4	6.7	4.1	-282	-3	-2	7.7	3192	59	-4.0	-106	0.394					
56-44.2483-104.0597-2-11-	0-W05304	7346	202	4039	51	-2	3.5	2.2	-226	-1	-1	4.6	2654	41	3.0	-30	0.487					
46-44.2289-104.0192-2-11-	0-W05305	19510	112	2226	-42	-3	2.3	-0.8	-150	-2	-1	3.4	1287	29	1.7	-69	0.588					
46-44.2289-104.0033-2-11-	0-W05306	11890	327	4540	-90	-4	5.2	3.7	-239	-4	-2	6.2	2470	73	-3.8	-113	0.498					
46-44.1419-104.0469-2-11-	0-W05309	18330	329	3523	-93	-5	3.4	1.9	-273	-4	-2	6.3	1721	30	-5.1	-132	0.259					
46-44.1528-104.0228-2-12-	0-W05390	11060	266	7432	-25	-3	3.8	3.4	-303	-1	-1	6.4	3164	41	3.1	-40	0.423					
46-44.1556-104.0106-2-15-	0-W05400	14120	411	6440	-49	-4	6.9	4.5	-300	-2	-1	9.8	2940	65	3.7	74	0.307					
46-44.1222-104.0155-2-11-	0-W05401	14070	495	5709	-95	-5	5.2	3.4	-320	-4	-2	7.9	2964	47	-4.7	-144	0.297					
46-44.0700-104.0292-2-11-	0-W05402	13950	875	5192	-78	-4	6.4	4.2	-358	-3	-2	8.0	3242	54	-4.2	-113	0.313					
56-44.1181-104.0553-2-11-	0-W05403	7279	252	2312	-64	-5	4.9	2.9	-247	-3	-2	6.3	2054	40	-3.7	-105	0.268					
56-44.0872-104.0625-2-15-	0-W05404	4909	346	2806	-67	-3	3.9	3.1	-218	-3	-1	3.7	2128	33	-3.2	-102	0.541					
56-44.0814-104.0544-2-12-	0-W05405	9679	316	4242	-75	-4	6.7	3.4	-241	-4	-2	8.4	3196	93	-4.2	66	0.370					
56-44.1464-104.1017-2-11-	0-W05406	9026	165	4012	-17	-2	3.0	1.9	-202	-1	-1	4.8	2273	32	2.1	-30	0.427					
56-44.1272-104.0850-2-11-	0-W05407	3196	227	3255	-41	-3	3.1	1.8	-186	-2	-1	4.6	2098	27	-2.1	-65	0.433					
56-44.1311-104.1381-2-15-	0-W05408	10420	249	3720	-135	-6	4.9	3.5	-293	-6	-3	8.6	2431	44	-6.3	-205	0.216					
56-44.0969-104.1575-2-15-	0-W05409	10960	423	5087	-70	-4	8.0	3.9	-250	-4	-2	10.0	3244	55	4.4	-93	0.273					
46-44.0358-104.0108-2-15-	0-W05410	14100	434	5025	40	-3	6.0	3.3	-318	-1	-1	9.1	3949	54	2.9	-35	0.292					
46-44.0178-104.0128-2-15-	0-W05411	6667	119	3248	-36	-3	2.3	2.1	-142	-2	-1	3.5	1211	24	-1.9	-58	0.529					
56-44.0235-104.0931-2-15-	0-W05412	19030	427	4338	-75	-4	7.5	3.9	-268	-3	-2	8.2	3546	59	-3.3	-110	0.321					
56-44.0197-104.0989-2-15-	0-W05413	19370	486	5897	-74	-4	8.4	4.4	-282	-3	-2	8.2	3316	50	-4.3	-110	0.320					
56-44.0197-104.0758-2-15-	0-W05414	10420	591	4611	39	-3	4.8	3.0	-352	-1	-1	6.7	3651	42	2.6	65	0.364					
56-44.0467-104.2208-2-11-	0-W05415	7428	148	5495	-35	-3	2.6	1.9	-161	-2	-1	3.5	1295	16	-2.0	-57	0.440					
56-44.0108-104.2097-2-12-	0-W05416	14200	227	4266	-71	-4	5.7	5.0	-204	-3	-2	6.6	3073	45	-3.0	95	0.332					
56-44.0144-104.1725-2-12-	0-W05417	58270	362	5406	-74	-4	7.2	2.6	-262	-4	-2	5.8	3996	41	-4.1	-98	0.374					
56-44.0122-104.1306-2-15-	0-W05418	38180	414	7624	32	-2	5.7	3.6	-308	-1	-1	6.3	3007	48	2.7	26	0.397					
56-44.0019-104.1758-2-15-	0-W05419	38770	418	7201	-41	-3	6.5	3.9	466	-2	-1	7.1	2542	45	5.1	-67	0.311					

APPENDIX II
STANDARD LASL HSSR PROCEDURES AND CODES

APPENDIX II-A
Summary of Standard LASL HSSR Field and Analytical Procedures

APPENDIX II-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 two prewashed and sealed, 25-ml polyethylene vials. Water samples in both vials 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 <100°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 sampler 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-half 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. Note that waters collected during the 1976 sampling season were analyzed for uranium before the concentration procedure was initiated. Consequently, the lower detection limit is 0.20 ppb, and uranium concentrations below the detection limit are reported as 0.10 ppb for these samples. Samples collected during the 1977 sampling season were analyzed to a lower detection limit of 0.02 ppb. 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 the 25-ml vials (or 41-ml reactor rabbits used in some of the previous work) and are analyzed in clean, labeled, 25-ml vials. Each water sample is weighed, and its weight (less that of the vial) and location number are recorded. The vials 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 0.5 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.

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 0.01 ppm uranium, far 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 multichannel 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_{α} 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 5-mg portion of the -325-mesh sample that has already been analyzed by x-ray fluorescence is mixed with 10 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 6A for 10 s, then 17A for 50 s. Photomultiplier tubes in a direct-reading spectrograph 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 10 ppm and the 610.3-nm line of Li is used for concentrations above 10 ppm. The V line is used to correct the Be value when V is present. The signals from the photomultiplier tubes are read by a digital voltmeter and are processed by a desk-top 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 elements 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 II-B

Explanation of Codes Used in Appendix I

APPENDIX II-B

EXPLANATION OF CODES USED

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-half of a degree Celsius (0.5°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/Buff	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/Buff	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
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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 -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 II-C

Key to Sample Types Listed in Appendix I

APPENDIX II-C

KEY TO SAMPLE TYPES 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.

KEY NO.

SOURCE / MEDIUM / TREATMENT

- 06 - Spring water sample filtered through a 0.45- μ membrane filter and acidified to a pH of ≤ 1 with reagent-grade nitric acid (HNO_3).
- 07 - Stream water sample filtered through a 0.45- μ membrane filter and acidified to a pH of ≤ 1 with reagent-grade nitric acid (HNO_3).
- 08 - Well water sample filtered through a 0.45- μ membrane filter and acidified to a pH of ≤ 1 with reagent-grade nitric acid (HNO_3).
- 09 - Natural pond water sample filtered through a 0.45- μ membrane filter and acidified to a pH of ≤ 1 with reagent-grade nitric acid (HNO_3).
- 10 - Artificial pond water sample filtered through a 0.45- μ membrane filter and acidified to a pH of ≤ 1 with reagent-grade nitric acid (HNO_3).
- 11 - Wet spring sediment sample dried at $\leq 100^\circ\text{C}$ and sieved to -100 mesh through stainless steel sieves.
- 12 - Wet stream sediment sample dried at $\leq 100^\circ\text{C}$ and sieved to -100 mesh through stainless steel sieves.
- 13 - Wet natural pond sediment sample dried at $\leq 100^\circ\text{C}$ and sieved to -100 mesh through stainless steel sieves.
- 14 - Wet artificial pond sediment sample dried at $\leq 100^\circ\text{C}$ and sieved to -100 mesh through stainless steel sieves.
- 15 - Dry stream sediment sample dried at $\leq 100^\circ\text{C}$ (if necessary) and sieved to -100 mesh through stainless steel sieves.

- 96 - Dry natural pond sediment sample dried at $\leq 100^{\circ}\text{C}$ (if necessary) and sieved to -100 mesh through stainless steel sieves.
- 97 - Dry artificial pond sediment sample dried at $\leq 100^{\circ}\text{C}$ (if necessary) and sieved to -100 mesh through stainless steel sieves.
- 99 - Dry spring sediment sample dried at $\leq 100^{\circ}\text{C}$ (if necessary) and sieved to -100 mesh through stainless steel sieves.

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SAMPLE LOCATION OVERLAY FOR THE
GILLETTE NTMS QUADRANGLE, WYOMING.

LEGEND

SYMBOLS	CONCENTRATIONS (ppb)
◇ SPRING	0.00- .50
□ STREAM	.51- 1.00
○ WELL	1.01- 2.00
△ NATURAL LAKE OR POND	2.01- 5.00
▽ ARTIFICIAL LAKE OR POND	5.01- 10.00
	10.01- 20.00
	20.01- 50.00
	> 50.00

URANIUM CONCENTRATIONS (ppb) IN WATERS -
OVERLAY TO THE
GILLETTE NTMS QUADRANGLE, WYOMING.

LEGEND

SYMBOLS		CONCENTRATIONS (ppb)	
◇	SPRING	○	0.01 - 1.00
□	STREAM	□	1.01 - 2.00
○	WELL	△	2.01 - 5.00
△	NATURAL LAKE OR POND	▽	5.01 - 10.00
▽	ARTIFICIAL LAKE OR POND	○	10.01 - 20.00
		□	20.01 - 50.00
		△	> 50.00

GILLETTE NTWS QUADRANGLE, WYOMING.
OVERLAY TO THE
URANIUM CONCENTRATIONS (ppb) IN WATERS -

U.S. GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
SACRAMENTO, CALIFORNIA

LEGEND

SYMBOLS	CONDUCTIVITIES ($\mu\text{mho/cm}$)
◇ SPRING	◇ ≤ 50
□ STREAM	□ 51-100
○ WELL	○ 101-200
△ NATURAL LAKE OR POND	△ 201-500
▽ ARTIFICIAL LAKE OR POND	▽ 501-1000
	◇ □ ○ △ ▽ 1001-2000
	◇ □ ○ △ ▽ 2001-5000
	◇ □ ○ △ ▽ > 5000

SCALE 1:250 000

CONDUCTIVITIES ($\mu\text{mho/cm}$) IN WATERS -
OVERLAY TO THE
GILLETTE NTMS QUADRANGLE, WYOMING.

LEGEND

SYMBOLS		CONDUCTIVITIES ($\mu\text{mho/cm}$)	
◇	SPRING	◇	> 5000
□	STREAM	□	5001-5000
○	WELL	○	1001-5000
△	NATURAL LAKE OR POND	△	201-1000
▽	ARTIFICIAL LAKE OR POND	▽	501-500
		◇	101-200
		□	51-100
		○	≤ 50

GILLETTE NWS QUADRANGLE, WYOMING.
OVERLAY TO THE
CONDUCTIVITIES ($\mu\text{mho/cm}$) IN WATERS -

LEGEND

SYMBOLS	CONCENTRATIONS (ppm)
◇ WET SPRING	◇ □ △ ▽ ⊠ ○ ⊕ + 0.00- 2.00
□ WET STREAM	◇ □ △ ▽ ⊠ ○ ⊕ + 2.01- 3.00
△ WET NATURAL LAKE OR POND	◇ □ △ ▽ ⊠ ○ ⊕ + 3.01- 4.00
▽ WET ARTIFICIAL LAKE OR POND	◇ □ △ ▽ ⊠ ○ ⊕ + 4.01- 5.00
⊠ DRY STREAM	◇ □ △ ▽ ⊠ ○ ⊕ + 5.01- 6.00
○ DRY NATURAL LAKE OR POND	◇ □ △ ▽ ⊠ ○ ⊕ + 6.01- 7.00
⊕ DRY ARTIFICIAL LAKE OR POND	◇ □ △ ▽ ⊠ ○ ⊕ + 7.01- 8.00
+ DRY SPRING	◇ □ △ ▽ ⊠ ○ ⊕ + > 8.00

URANIUM CONCENTRATIONS (ppm) IN SEDIMENTS -
OVERLAY TO THE
GILLETTE NTMS QUADRANGLE, WYOMING.

LEGEND

SYMBOLS	CONCENTRATIONS (ppm)
◇ WET SPRING	0.00-2.00
□ WET STREAM	2.01-4.00
△ WET NATURAL LAKE OR POND	4.01-6.00
▽ WET ARTIFICIAL LAKE OR POND	6.01-8.00
⊗ DRY STREAM	8.01-10.00
○ DRY NATURAL LAKE OR POND	10.01-15.00
⊕ DRY ARTIFICIAL LAKE OR POND	15.01-20.00
⊙ DRY SPRING	> 20.00

GILLETTE NTWS QUADRANGLE, WYOMING.
OVERLAY TO THE
URANIUM CONCENTRATIONS (ppm) IN SEDIMENTS -

LEGEND

SYMBOLS	CONCENTRATIONS (ppm)
◇ WET SPRING	◇ 0.0- 4.0
□ WET STREAM	□ 4.1- 6.0
△ WET NATURAL LAKE OR POND	△ 6.1- 8.0
▽ WET ARTIFICIAL LAKE OR POND	▽ 8.1- 10.0
⊠ DRY STREAM	⊠ 10.1- 12.0
○ DRY NATURAL LAKE OR POND	○ 12.1- 14.0
⊕ DRY ARTIFICIAL LAKE OR POND	⊕ 14.1- 16.0
+ DRY SPRING	+ > 16.0

THORIUM CONCENTRATIONS (ppm) IN SEDIMENTS -
OVERLAY TO THE
GILLETTE NTMS QUADRANGLE, WYOMING.

LEGEND

SYMBOLS	CONCENTRATIONS (ppm)
◇	0.0 - 4.0
□	4.1 - 6.0
△	6.1 - 8.0
▽	8.1 - 10.0
⊕	10.1 - 12.0
⊗	12.1 - 14.0
⊙	14.1 - 16.0
⊕	> 16.0
+	DRY SPRING
◇	WET SPRING
□	WET STREAM
△	WET NATURAL LAKE OR POND
▽	WET ARTIFICIAL LAKE OR POND
⊕	DRY NATURAL LAKE OR POND
⊗	DRY ARTIFICIAL LAKE OR POND
⊙	DRY STREAM

GILLETTE NMS QUADRANGLE, WYOMING.
OVERLAY TO THE
THORIUM CONCENTRATIONS (ppm) IN SEDIMENTS -