APPENDIX G

WESTON'S TRIP REPORT

SEDIMENT INVESTIGATION TRIP REPORT

Upper Columbia River/Lake Roosevelt Expanded Site Inspection
Northeast Washington

TDD: 01-02-0001

Prepared By:

ROY F. WESTON, INC.
190 Queen Anne Avenue North, Suite 200
Seattle, WA 98109-4926

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APPROVALS			
TITLE	NAME	SIGNATURE	DATE
START Site Leader	Susan FitzGerald		12-17-01
START Project Manager	Keith Pine		12/17/01
START QA Officer	Paul Swift		12/17/01

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SECTION 1

PROJECT DESCRIPTION

1.1 INTRODUCTION

Pursuant to United States Environmental Protection Agency (EPA) Contract No. 68-S0-01-02, Technical Direction Document (TDD) Number 01-02-0001, Roy F. Weston, Inc. (WESTON®) conducted sediment sampling on the Upper Columbia River/Lake Roosevelt for an Expanded Site Investigation (ESI). The ESI has been organized as a cooperative effort involving WESTON and Ecology and Environment, Inc. (E&E).

The ESI is conducted under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), is intended to collect sufficient data to enable evaluation of the site's potential for inclusion on the National Priorities List (NPL) and, for those sites determined to be NPL candidates, to establish priorities for additional action.

This document presents a summary of the sampling activities and the analytical results of the investigation conducted by WESTON for the Upper Columbia River/Lake Roosevelt ESI. WESTON's investigation area consisted primarily of the Columbia River and the reservoir formed upstream of Grand Coulee Dam known as Franklin D. Roosevelt Lake (Lake Roosevelt), from Inchelium, Washington, northward to the United States/Canada international border, including all known tributaries entering the river within that area. Sediment and/or surface water samples were also collected from Lake Roosevelt near the Grand Coulee Dam, selected tributaries to the Pend Oreille River, and the Columbia River tributary at the Cleveland Mine site in Stevens County (Figure 1). Sampling and analyses were conducted in accordance with the procedures outlined in the Sampling and Quality Assurance Plan (SQAP; WESTON 2001).

This document includes project description information (Section 1), sampling and analytical results (Section 2), and references (Section 3).

1.2 SAMPLE TYPES, NUMBERS, AND LOCATIONS

In total, WESTON collected 188 field samples between 14 May and 28 June 2001. The total number of samples includes:

- 53 surface sediment samples from the Columbia River/Lake Roosevelt, including 51 from depth intervals ranging from 0 to 8 inches below the sediment surface, and two from depth intervals from 18 to 24 inches below the sediment surface.
- 115 surface sediment samples from tributaries to the Columbia River/Lake Roosevelt.
- 6 soil samples in the Columbia River watershed.
- 5 surface sediment samples from tributaries to the Pend Oreille River.

- 1 surface water sample from the Columbia River/Lake Roosevelt.
- 3 surface water samples from tributaries to the Columbia River/Lake Roosevelt.
- 4 surface water samples from tributaries to the Pend Oreille River.
- 1 surface water sample from the City of Grand Coulee municipal drinking water distribution system.

The samples collected included those resulting from changes to the proposed scope of work requested by the EPA Task Monitors (TM), Mr. Mark Ader and Ms. Monica Tonel. Seventy-one tributaries located along Lake Roosevelt from Inchelium to Marcus Island, identified as "Phase 2" tributaries in the SQAP, were sampled. WESTON collected sediment, soil, and/or surface water samples from selected mine sites under investigation by E&E as part of the ESI. WESTON was unable to collect proposed samples in Canada. These samples may be collected at a later date if access is granted by the Canadian government.

Sample field duplicate quantities originally included in sample totals proposed in the SQAP were not collected, at the direction of the EPA TM.

1.3 STATION LOCATIONS, SAMPLING METHODS, AND ANALYTICAL REQUIREMENTS

1.3.1 Station Locations

Surface sediment and surface water sampling station locations are depicted in Figures 1A through 1J. Except where noted, the locations illustrated in the figures are based on Global Positioning System (GPS) data recorded in the field (which was differentially corrected through post-processing by Mr. Matt Gubitosa of EPA), and on location notes recorded on Field Sample Record Forms. A table of corrected GPS coordinates and location notes for each sampling station is provided in Appendix A. Copies of the Field Sample Record Forms for each sample are provided in Appendix B.

At the request of the EPA TM, station identification (ID) codes were revised to follow a sequential order from downstream to upstream along the river, as presented in Figures 1A through 1J. The station IDs consist of a two-letter code indicating the station type, followed by a three-digit sequential number. The following station type codes were used:

CS — Columbia River sediment
CW — Columbia River surface water
TS — Tributary sediment (downstream sampling location)
US — Tributary sediment/soil (upstream/upland sampling location)
UW — Upland surface water
RS — Rinsate of sediment sampling equipment
RW — Rinsate of water sampling equipment
TB — Trip Blank

Stations sampled in the field closely matched those proposed in Plates 1 through 8 of the SQAP (except for proposed locations shown in Canada). Upstream tributary locations and samples collected at individual mine sites were determined in the field at the direction of the EPA TM.

In several instances, proposed sampling locations were moved or abandoned due to the proximity of archaeological sites, inappropriate settings (e.g., landslide or non-depositional environments), physical hazards, the inability to identify specific stream channels, or property access restrictions to tributary locations. In addition to these factors, adequate recovery of surface sediment was not possible at some river sampling locations; in these cases, multiple attempts were made before the station was abandoned.

A sample station at Plum Point (CS003) was added in the field, at the direction of the EPA TM, in response to a request by Ms. Patti Stone of the Colville Confederated Tribes. Ms. Stone requested a sample from the Sawilla Basin area to replace the proposed 1.5 to 2-foot interval sample that was not collected at the Crescent Bay boat ramp (due to the presence of large cobbles at that location). Plum Point was selected because it appeared to be representative of conditions in the Sawilla Basin. While attempting to collect the sample, it became apparent that the surface sediment deposited on the bar at Plum Point consisted of a thin layer (3 inches) of loose material above dense older material. It was determined that a sample from the 1.5 to 2-foot interval would not be representative of material deposited or influenced by Lake Roosevelt; for this reason, only the top few inches of material were sampled, and the deeper sample at Plum Point was not collected.

The sample location at the Boise Cascade log boom (CS020), and a tributary location (TS050) were added based on observations in the field. The samples collected from 18- to 24-inch interval at Haag Cove (CS017) and Pingston Creek (CS024) were collected at the request of the EPA TM.

Stranger Creek East was not sampled. Although the field sampling record for station TS007 (sample TR-060-SD) identifies the sample location as Stranger Creek East, the corrected GPS data indicates that the location sampled was an unnamed ephemeral tributary. Stations TS009 (sample TR-063-SD) and TS037 (sample TR-090-SD) are unproposed locations identified in the field as dry ephemeral tributaries.

1.3.2 Sampling Methods

1.3.2.1 Sediment Sampling

Sediment samples were collected from the Columbia River and Lake Roosevelt during the annual low water season brought about by managed discharges at Grand Coulee Dam. The mean high water (MHW) or average annual "full pool" elevation for Lake Roosevelt is 1,290 feet above mean sea level (feet MSL). All sediment samples from the river (including Lake Roosevelt) were collected from locations below the MHW elevation, as determined by estimated water level elevations and observed shoreline MHW level indicators (e.g., water marks on shoreline, tree lines). Water levels measured at Grand Coulee Dam during the river sediment sampling period ranged from 1237.01 feet MSL on 14 May to 1277.88 feet MSL on 8 June. A

graph of water level elevations measured at Grand Coulee Dam over the period of 14 May through 30 June is presented in Figure 2. Many of the sampling locations were subaerially exposed during the sampling event because of the seasonally low water levels. Both exposed and submerged sediment samples were collected.

At every exposed river sampling area, metals concentrations of potential sampling locations were screened using a portable x-ray fluorescence analyzer (XRF). Generally, two to three locations in the station area were screened, and the location displaying the highest concentrations was selected for sampling. A memo presenting the results of XRF screening conducted in the field is included in Appendix C.

All sediment samples were collected using stainless steel sampling equipment, including a petit ponar dredge, hand auger, and/or bowls and spoons. All sampling was conducted in accordance with the procedures outlined in the SQAP. Samples from all locations were collected in a downstream-to-upstream sequence, except for CR-036-SD, which was collected at a more southerly point (downstream) than CR-035-SD, which was collected two hours earlier. Three sediment samples at the Cleveland Mine site were collected in an upstream to downstream sequence.

All but one of the exposed stations were sampled using a bowl and spoon. The two samples at Haag Cove (CS017), from depth intervals of 0 to 6 inches, and 18 to 24 inches below the sediment surface, respectively, were collected using a hand auger.

All but one of the submerged stations were sampled using a petit ponar dredge sampler deployed from the EPA research vessel (RV) *Monitor*. The RV *Monitor* was operated by Mr. "Doc" Thompson of EPA. Sampling with the petit ponar dredge required between one and five grabs to collect the required volume. Penetration depths using the dredge ranged from 0 to 5 inches. Sediment from submerged sites was not screened with the XRF due to the high moisture content of the material, which interferes with the instrument's analysis. The station north of Pingston Creek (CS024) was covered by approximately two feet of water at the time of sampling, and the sample from this station was collected from a depth of 18 to 24 inches below the sediment surface using a hand auger.

Tributary sampling locations were identified based on United States Geological Survey (USGS) 7.5 minute series topographic maps. Samples from tributaries were collected using a bowl and spoon. Water depths at tributary sampling locations were generally 0 to 4 inches, but depths up to 12 inches were recorded. When submerged sediment was sampled, care was taken to minimize the disturbance and suspension of fine-grained material. Depths of tributary sediment samples ranged from 0.5 to 10 inches below the sediment surface. Sampling locations at tributaries were generally not screened with the XRF, at the direction of the EPA TM.

Upon collection, sample material was typically placed in pre-cleaned stainless-steel bowls for homogenization prior to being placed in labeled pre-cleaned sample jars. Sample material at 19 Phase 2 tributaries that was to be analyzed for Target Analyte List (TAL) metals only, was collected and homogenized directly in the glass sample jars. This was necessary due to a shortage of pre-cleaned sampling bowls resulting from the addition of the Phase 2 tributaries,

and was noted on the sampling form at each location where it occurred. Observations of sample material characteristics such as grain size, color, odor, and the presence of debris (including suspected slag material) were noted on a Field Sampling Record Form for each sample (Appendix B). Sample grain size was described according to visually estimated percentages of gravel, sand, silt, and clay. Each sample was subsequently classified into one of four categories, based on the estimated percentage of fine-grained sediment (silt and clay) or "fines" in each sample. The sample grain size classifications were as follows:

1. Less than 25% fines
2. Greater than 25% but less than 50% fines
3. Greater than 50% but less than 75 % fines
4. Greater than 75% fines

The grain size classification for each sediment sample is listed in Table 1-1.

After the sample containers were filled, the samples were photographed and packed in coolers with ice for shipment.

1.3.2.2 Water Sampling

Surface water sampling followed the procedures detailed in the SQAP. One sample of surface water from the Columbia River/Lake Roosevelt was collected immediately upstream of the City of Grand Coulee municipal drinking water system intake (station CW002). A Kemmerer bottle was lowered from the RV *Monitor* to approximately 1208 feet above MSL, the elevation of the intake as reported by Mr. Dennis Francis of the City of Grand Coulee. The sample was collected, and subsequently decanted into sample containers.

One water sample from the City of Grand Coulee municipal supply was collected directly from a spigot located in the system's Dill Avenue Pump House (station CW001). Contrary to information obtained prior to the sampling event, the Grand Coulee municipal water system did not have a sampling port located upstream of the city's chlorination treatment point. Sodium thiosulfate ($Na_2S_2O_3$) was not available at the time of sampling; therefore, with the permission of the EPA, the VOC water sample was submitted without $Na_2S_2O_3$ preservation. The water samples from Lake Roosevelt and the City of Grand Coulee were also submitted to the laboratory for TAL metals analysis. The samples were preserved with nitric acid at the lab prior to analysis.

Seven surface water samples were collected from tributaries to the Columbia River/Lake Roosevelt and Pend Oreille Rivers by directly immersing the sample containers into the stream. At the Cleveland Mine site, the surface water sample was collected following the collection of upstream sediment samples.

1.3.3 Analytical Requirements

In general, all samples were analyzed in accordance with the methods and procedures specified in the SQAP (WESTON 2001). Chemical analyses performed on each sample are presented in Table 1-2. A sample quality assurance and quality control (QA/QC) analysis summary is

presented in Table 1-3. Minor deviations from the proposed sample analytical requirements occurred as follows:

- Pesticide/polychlorinated biphenyls (Pest/PCB) and total organic carbon (TOC) analyses were added to the requirements for samples from four of the five northernmost tributaries to the Columbia River, at the direction of the EPA TM; these tributaries were identified in the SQAP for TAL metals analysis only.
- Phase 2 tributary sample analyses were not included in the quantities proposed in the SQAP. The Phase 2 tributary sampling effort resulted in an additional 71 samples analyzed for TAL metals, and an additional 17 samples analyzed for Pest/PCB and TOC.
- Three soil samples collected at the Van Stone Mine site were submitted for TAL metals, Pest/PCB, TOC, and semivolatile organic compound (SVOC; method OLM04.2) analyses. Soil SVOC analysis was not included among the analytical requirements in the SQAP.
- It was estimated in the SQAP that four surface water field samples would be collected and analyzed for TAL metals, Pest/PCB, VOCs, and SVOCs. A total of nine surface water field samples were actually collected; all were analyzed for TAL metals, and two were also analyzed for Pest/PCB, VOCs, and SVOCs.

1.4 SAMPLE HANDLING, PACKAGING, AND SHIPPING

Samples were handled, packaged, and shipped in accordance with the procedures specified in the SQAP (WESTON 2001).

1.5 DOCUMENTATION

All field documentation, sample designation, labeling, and chain of custody procedures were followed in accordance with the procedures specified in the SQAP (WESTON 2001).

1.6 CONTACTS

Several federal agencies assisted in this investigation, including the National Park Service, which agreed to provide backup vessels and to serve as an emergency contact for the field crew; the U.S. Forest Service, which provided personnel to assist in sample collection; and the U.S. Bureau of Reclamation, which provided periodic updates on Lake Roosevelt water levels. A list summarizing individuals and affiliated agencies contacted during the course of this investigation is provided in Appendix D.

1.7 EQUIPMENT DECONTAMINATION AND INVESTIGATION-DERIVED WASTE

Procedures specified in the SQAP (WESTON 2001) for decontaminating equipment and disposing of investigation-derived waste (IDW) were followed during field activities.

Every effort was made to minimize the need for decontamination of sampling equipment through the use of dedicated pre-cleaned sampling equipment (e.g., bowls, spoons), however, the use of non-dedicated sampling equipment (e.g., dredge samplers) was required in some locations, as discussed above. When used, the non-dedicated sampling equipment was decontaminated prior to each use to avoid sample cross-contamination.

The following procedure was followed for all non-dedicated sampling equipment used to collect routine samples undergoing trace organic or inorganic constituent analyses. Non-dedicated sampling equipment was:

1. Cleaned with tap water and nonphosphate detergent using a brush if necessary to remove particulate matter and surface films.
2. Rinsed thoroughly with tap or river water.
3. Rinsed thoroughly with analyte free water.
4. Air-dried, when possible, away from potential sources of contamination (e.g., splashes).

The use of a solvent rinse, proposed in the decontamination procedure presented in the SQAP was never necessary because organic residues were never apparent following the detergent wash.

WESTON made every effort to minimize the generation of IDW that could not be disposed of as solid waste. All extra sediment volume collected for a sample remained at the sampling location. Disposable personal protective equipment generated during field activities was double-bagged in plastic garbage bags and disposed of at a solid waste disposal facility. No IDW water was generated during the investigation.

SECTION 2

SAMPLING RESULTS

The following sections present the analytical data generated during this investigation. Chain-of-custody forms and data validation reports are provided in Appendix E.

2.1 DATA PRESENTATION

Analytical data tables for surface sediment and surface water are presented in Appendix F. Table 2.1 shows concentrations of constituents detected in sediment samples. Table 2.2 shows concentrations of constituents detected in surface water samples. Analytical data are reported as follows:

- Sediment inorganics are expressed in units of milligram per kilogram (mg/kg) dry-weight. Milligram per kilogram is equivalent to part per million (ppm).
- Sediment organics are expressed in units of microgram per kilogram (µg/kg) dry-weight; sediment nonionic/nonpolar organics are also expressed in units of µg/kg-organic carbon (i.e., the dry-weight concentration was normalized to the organic carbon content of the sample by dividing the chemical concentration by the sample-specific decimal fraction of organic carbon). Microgram per kilogram is equivalent to part per billion (ppb).
- Sediment total organic carbon (TOC) are expressed as mg/kg.
- Surface water inorganics are expressed in units of microgram per liter (µg/L).
- Surface water organics are expressed in units of microgram per liter (µg/L).

The following qualifiers were used in the data validation:

U — The compound was analyzed for, but not detected.

UJ — The compound was analyzed for, but was not detected; the associated quantitation limit is an estimate because quality control criteria were not met.

J — The analyte was positively identified, but the associated numerical values is an estimate quantity because quality control criteria were not met or because concentrations reported are less than the quantitation limit or lowest calibration standard.

NJ — The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

R — Quality control indicates that data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification.

B — Detected inorganic concentration is below the method reporting limit/Contract Required Detection Limit (CRDL) but is above the instrument detection limit.

Q — Detected organic concentration is below the method reporting limit/CRDL but is above the method detection limit.

H — High bias.

K — Unknown bias.

L — Low bias.

2.2 SEDIMENT ANALYTICAL RESULTS

Table 2-1 shows concentrations of constituents detected in sediment samples.

2.2.1 TAL Metals

One hundred seventy-nine samples were analyzed for TAL metals. Analytical results indicated that TAL metals were detected at all stations. Nine metals were detected in all samples: aluminum, barium, calcium, copper, iron, magnesium, manganese, vanadium, and zinc. Table 2-1 provides a summary of the detected metals. Figures 3A through 3J illustrate copper, lead, and zinc concentrations in sediment samples. The sediment data table in Appendix F presents a complete listing of the analytical results.

2.2.2 Pesticides/PCBs

One hundred samples were analyzed for Pest/PCBs. Pesticides were detected at 12 stations. Seven pesticide compounds were detected: 4,4'-DDE, 4,4'-DDT, alpha-chlordane, beta-BHC, endrin, endrin aldehyde, and methoxychlor. Detected concentrations ranged from an estimate of 0.64 µg/kg endrin aldehyde in a sample from an unnamed tributary (station TS072) to 52 µg/kg methoxychlor in a sample from Lake Roosevelt in the Marcus Flats area (station CS026).

Aroclor-1254 and Aroclor-1260 were the only detected PCBs. These compounds were detected in samples from two stations in Lake Roosevelt, the North Dam boat ramp (station CS002) and north of Quillisascut Creek (station CS012). PCB concentrations were qualified as estimates, ranging from 5.9 µg/kg (station CS002) to 38 µg/kg (station CS012).

2.2.3 Total Organic Carbon

Organic carbon was detected in 86 of the 97 samples analyzed for TOC. Detected concentrations ranged from 1,210 mg/kg in the river sediment sample from south of Steamboat Rock (station CS046), to 328,000 mg/kg in the tributary sediment sample from Cuba Canyon Creek (station TS031).

2.2.4 Semivolatile Organic Compounds

Three soil samples from the Van Stone Mine site were analyzed for SVOCs. Two SVOCs were detected. Benzylbutylphthalate was detected in the sample from station US009 at an estimated concentration of 220 µg/kg, and in the sample from station US007 at an estimated concentration

of 130 µg/kg. Bis(2-ethylhexyl)phthalate was detected in the sample from station US007 at an estimated concentration of 56 µg/kg.

2.3 SURFACE WATER ANALYTICAL RESULTS

Table 2-2 shows concentrations of constituents detected in surface water samples.

2.3.1 TAL Metals

Nine surface water samples were analyzed for TAL metals. Table 2-2 provides a summary of the detected metals. Appendix F presents a complete listing of the data.

2.3.2 Pesticides/PCBs

Two surface water samples, from the City of Grand Coulee municipal drinking water system distribution point (station CW001) and from Lake Roosevelt near the system intake (station CW002), were analyzed for pesticides/PCBs. No pesticides or PCBs were detected in either sample.

2.3.3 Semivolatile Organic Compounds

Two surface water samples, from the City of Grand Coulee municipal drinking water system distribution point (station CW001) and from Lake Roosevelt near the system intake (station CW002), were analyzed for SVOCs. No SVOCs were detected in either sample.

2.3.4 Volatile Organic Compounds

Two surface water samples, from the City of Grand Coulee municipal drinking water system distribution point (station CW001) and from Lake Roosevelt near the system intake (station CW002), were analyzed for VOCs. Chloroform, the only VOC detected, was reported in the sample from the distribution point at a concentration of 26 µg/L.

SECTION 3

REFERENCE

WESTON (Roy F. Weston, Inc.). 2001. Upper Columbia River/Lake Roosevelt Expanded Site Inspection Sampling and Quality Assurance Plan, TDD: 01-02-0001-A, EPA Contract: 68-S0-01-02. Prepared for the U.S. Environmental Protection Agency Region X. May 2001.

TABLES

Table 1-1—Grain Size Classification of Sediment Samples

Station ID	Internal Sample ID	Grain Size Class	Station ID	Internal Sample ID	Grain Size Class	Station ID	Internal Sample ID	Grain Size Class
CS001	CR-003-SD	3	TS008	TR-064-SD	4	TS068	TR-115-SD	1
CS002	CR-001-SD	3	TS009	TR-063-SD	1	TS069	TR-119-SD	1
CS003	CR-004-SD	4	TS010	TR-065-SD	1	TS070	TR-116-SD	1
CS004	CR-005-SD	4	TS011	TR-066-SD	4	TS071	TR-117-SD	1
CS005	CR-006-SD	4	TS012	TR-068-SD	3	TS072	TR-118-SD	1
CS006	CR-007-SD	1	TS013	TR-067-SD	2	TS073	TR-120-SD	1
CS007	CR-008-SD	2	TS014	TR-069-SD	1	TS074	TR-121-SD	1
CS008	CR-009-SD	2	TS015	TR-070-SD	3	TS075	TR-122-SD	1
CS009	CR-010-SD	1	TS016	TR-071-SD	3	TS076	TR-001-SD	3
CS010	CR-011-SD	4	TS017	TR-072-SD	4	TS077	TR-002-SD	3
CS011	CR-012-SD	4	TS018	TR-073-SD	4	TS078	TR-005-SD	2
CS012	CR-013-SD	4	TS019	TR-074-SD	1	TS079	TR-004-SD	2
CS013	CR-014-SD	4	TS020	TR-075-SD	4	TS080	TR-006-SD	2
CS014	CR-015-SD	4	TS021	TR-076-SD	4	TS081	TR-007-SD	3
CS015	CR-016-SD	4	TS022	TR-077-SD	2	TS082	TR-008-SD	3
CS016	CR-017-SD	4	TS023	TR-078-SD	4	TS083	TR-009-SD	3
CS017	CR-018-SD	4	TS024	TR-079-SD	3	TS084	TR-010-SD	1
CS017	CR-066-SD	3	TS025	TR-080-SD	2	TS085	TR-011-SD	4
CS018	CR-019-SD	3	TS026	TR-081-SD	3	TS086	TR-012-SD	NA
CS019	CR-020-SD	4	TS027	TR-082-SD	3	TS087	TR-013-SD	2
CS020	CR-023-SD	4	TS028	TR-083-SD	2	TS088	TR-014-SD	2
CS021	CR-022-SD	4	TS029	TR-084-SD	2	TS089	TR-016-SD	NA
CS022	CR-024-SD	4	TS030	TR-085-SD	2	TS090	TR-040-SD	1
CS023	CR-025-SD	3	TS031	TR-086-SD	1	TS091	TR-127-SD	2
CS024	CR-062-SD	3	TS032	TR-087-SD	1	TS092	TR-041-SD	2
CS025	CR-026-SD	4	TS033	TR-088-SD	4	TS093	TR-017-SD	3
CS026	CR-029-SD	3	TS034	TR-089-SD	1	TS094	TR-018-SD	3
CS027	CR-027-SD	3	TS035	TR-128-SD	2	TS095	TR-019-SD	2
CS028	CR-028-SD	4	TS036	TR-129-SD	4	TS096	TR-042-SD	1
CS029	CR-030-SD	3	TS037	TR-090-SD	1	TS097	TR-020-SD	3
CS030	CR-031-SD	3	TS038	TR-091-SD	1	TS098	TR-022-SD	NA
CS031	CR-032-SD	2	TS039	TR-093-SD	1	TS099	TR-043-SD	1
CS032	CR-033-SD	3	TS040	TR-094-SD	1	TS100	TR-023-SD	2
CS033	CR-034-SD	3	TS041	TR-095-SD	2	TS101	TR-044-SD	1
CS034	CR-036-SD	3	TS042	TR-096-SD	3	TS102	TR-024-SD	4
CS035	CR-035-SD	3	TS043	TR-097-SD	2	TS103	TR-025-SD	1
CS036	CR-037-SD	2	TS044	TR-104-SD	1	TS104	TR-045-SD	2
CS037	CR-038-SD	2	TS045	TR-105-SD	4	TS105	TR-047-SD	1
CS038	CR-039-SD	2	TS046	TR-106-SD	2	TS106	TR-026-SD	2
CS039	CR-040-SD	2	TS047	TR-107-SD	4	TS107	TR-027-SD	2
CS040	CR-041-SD	2	TS048	TR-098-SD	1	TS108	TR-028-SD	3
CS041	CR-042-SD	1	TS049	TR-099-SD	1	TS109	TR-029-SD	2
CS042	CR-043-SD	1	TS050	TR-125-SD	2	TS110	TR-030-SD	1
CS043	CR-044-SD	1	TS051	TR-100-SD	2	US001	BK-150-SD	1
CS044	CR-045-SD	1	TS052	TR-101-SD	1	US002	BK-152-SD	1
CS045	CR-046-SD	1	TS053	TR-102-SD	1	US003	BK-153-SD	1
CS046	CR-047-SD	1	TS054	TR-103-SD	1	US004	BK-155-SD	1
CS047	CR-048-SD	1	TS055	TR-108-SD	1	US005	BK-130-SD	1
CS048	CR-049-SD	1	TS056	TR-109-SD	1	US006	BK-131-SD	1

Table 1-1—Grain Size Classification of Sediment Samples

Station ID	Internal Sample ID	Grain Size Class	Station ID	Internal Sample ID	Grain Size Class	Station ID	Internal Sample ID	Grain Size Class
CS049	CR-050-SD	1	TS057	TR-110-SD	1	US007	BK-134-SD	3
CS050	CR-051-SD	2	TS058	TR-111-SD	1	US008	BK-135-SD	2
CS051	CR-052-SD	1	TS059	TR-112-SD	1	US009	BK-133-SD	1
CS052	CR-053-SD	1	TS060	TR-113-SD	1	US010	BK-139-SD	1
TS001	TR-056-SD	4	TS061	TR-123-SD	1	US011	BK-142-SD	4
TS002	TR-057-SD	4	TS062	TR-124-SD	1	US012	BK-140-SD	1
TS003	TR-058-SD	3	TS063	TR-126-SD	1	US013	BK-138-SD	1
TS004	TR-059-SD	3	TS064	TR-037-SD	1	US014	TR-147-SD	1
TS005	TR-061-SD	1	TS065	TR-038-SD	2	US015	TR-145-SD	1
TS006	TR-062-SD	2	TS066	TR-039-SD	3	US016	TR-136-SD	1
TS007	TR-060-SD	1	TS067	TR-114-SD	1			

Grain Size Classes:

1. < 25% fines
2. Greater than 25% but less than 50% fines
3. Greater than 50% but less than 75% fines
4. > 75% fines

NA: Not available

Table 1-2—Sample Analytical Requirements

Station ID	Station Description	Sample Interval (below media surface)	Sample Identification				Analyses					Sample Date	Sample Time
			Regional Tracking #	Inorganic CLP #	Organic CLP #	Internal Sample ID	TAL Metals	Pest/PCB	VOC	SVOC	TOC		
CW001	Grand Coulee Drinking Water System distribution	NA (spigot)	01204101	MJ08Y3	JX426	CR-002-SW	X	X	X	X		14-May-01	1435
CW002	Lake Roosevelt Grand Coulee Drinking Water Intake	32 feet	01204102	MJ08Y4	JX427	CR-003-SW	X	X	X	X		14-May-01	1130
CS001	Lake Roosevelt Crescent Bay boat ramp	0 - 3"	01204106	MJ08Y8	JX431	CR-003-SD	X	X			X	14-May-01	1800
CS002	Lake Roosevelt North Dam Boat Ramp	0	01204104	MJ08Y6	JX429	CR-001-SD	X	X			X	14-May-01	1900
CS003	Lake Roosevelt Plum Point	0 -4"	01204107	MJ08Y9	JX432	CR-004-SD	X	X			X	15-May-01	1300
CS004	Lake Roosevelt near Inchelium	0 -4"	01204110	MJ08Z0	JX433	CR-005-SD	X	X			X	17-May-01	1000
CS005	Lake Roosevelt at point south of Hall Creek	0 -4"	01204111	MJ08Z1	JX434	CR-006-SD	X	X			X	17-May-01	1045
CS006	Lake Roosevelt at Mission Point	0 -4"	01204112	MJ08Z2	JX435	CR-007-SD	X	X			X	17-May-01	1130
CS007	Lake Roosevelt north of Daisy Station	0 - 2 "	01204113	MJ08Z3	JX436	CR-008-SD	X	X			X	17-May-01	1330
CS008	Lake Roosevelt south of Cheweka Creek	0 - 4"	01204114	MJ08Z4	JX437	CR-009-SD	X	X			X	17-May-01	1415
CS009	Lake Roosevelt south of Chalk Grade Point	0 - 7 "	01204115	MJ08Z5	JX438	CR-010-SD	X	X			X	17-May-01	1445
CS010	Lake Roosevelt south of Barnaby Island	0 - 0.5"	01204116	MJ08Z6	JX439	CR-011-SD	X	X			X	17-May-01	1600
CS011	Lake Roosevelt on flats north of Quillisascut Creek	0 - 2 "	01204117	MJ08Z7	JX440	CR-012-SD	X	X			X	17-May-01	1700
CS012	Lake Roosevelt on flats north of Quillisascut Creek	0 - 3 "	01204118	MJ08Z8	JX441	CR-013-SD	X	X			X	18-May-01	1030
CS013	Lake Roosevelt on flats between French Point Rocks and La Fleur Creek	0 - 4 "	01204119	MJ08Z9	JX442	CR-014-SD	X	X			X	18-May-01	1100
CS014	Lake Roosevelt on mid-channel bar east of French Point Rocks	0 - 4 "	01204120	MJ0900	JX443	CR-015-SD	X	X			X	18-May-01	1230

Table 1-2—Sample Analytical Requirements

Station ID	Station Description	Sample Interval (below media surface)	Sample Identification				Analyses					Sample Date	Sample Time
			Regional Tracking #	Inorganic CLP #	Organic CLP #	Internal Sample ID	TAL Metals	Pest/PCB	VOC	SVOC	TOC		
CS015	Lake Roosevelt north of French Point	0 - 8 "	01204121	MJ0901	JX444	CR-016-SD	X	X			X	18-May-01	1330
CS016	Lake Roosevelt on flats North of Bradbury Beach	0 - 1"	01204122	MJ0902	JX445	CR-017-SD	X	X			X	18-May-01	1430
CS017	Lake Roosevelt on flats fronting Haag Cove	0 - 6 "	01204123	MJ0903	JX446	CR-018-SD	X	X			X	18-May-01	1530
CS017	Lake Roosevelt on flats fronting Haag Cove	18-24"	01204124	MJ09E2	JX550	CR-066-SD	X	X			X	18-May-01	1545
CS018	Lake Roosevelt on flats south of Colville River	0 - 6.5 "	01204125	MJ0904	JX447	CR-019-SD	X	X			X	19-May-01	900
CS019	Lake Roosevelt in bay at Colville River mouth	0 - 5 "	01204126	MJ0905	JX448	CR-020-SD	X	X			X	19-May-01	1045
CS020	Lake Roosevelt south of Boise Cascade Log Boom	0 - 4"	01204127	MJ0908	JX451	CR-023-SD	X	X			X	19-May-01	1130
CS021	Lake Roosevelt, Marcus Flats, northwest of Martin Spring Creek	0 - 4"	01214102	MJ0907	JX450	CR-022-SD	X	X			X	21-May-01	1030
CS022	Lake Roosevelt, Marcus Flats, southwest of Pingston Creek	0 - 4"	01214104	MJ0909	JX452	CR-024-SD	X	X			X	21-May-01	1050
CS023	Lake Roosevelt, Marcus Flats (west bank)	0 < 0.25"	01214106	MJ0910	JX453	CR-025-SD	X	X			X	21-May-01	1200
CS024	Marcus Flats, north of Pingston Creek	18 - 24"	01234124	MJ0BK4	JX804	CR-062-SD	X	X			X	08-Jun-01	945
CS025	Lake Roosevelt on Marcus Flats west of Pingston Creek	0 - 3"	01214108	MJ0911	JX454	CR-026-SD	X	X			X	21-May-01	1245
CS026	Lake Roosevelt, Marcus Flats, south of Marcus Island	0 - 3"	01214114	MJ0914	JX457	CR-029-SD	X	X			X	21-May-01	1415
CS027	Lake Roosevelt, Marcus Flats, east of Kamloops	0 - 4"	01214110	MJ0912	JX455	CR-027-SD	X	X			X	21-May-01	1330
CS028	Lake Roosevelt, Marcus Flats northeast	0 - 2"	01214112	MJ0913	JX456	CR-028-SD	X	X			X	21-May-01	1445

Table 1-2—Sample Analytical Requirements

Station ID	Station Description	Sample Interval (below media surface)	Sample Identification				Analyses					Sample Date	Sample Time
			Regional Tracking #	Inorganic CLP #	Organic CLP #	Internal Sample ID	TAL Metals	Pest/PCB	VOC	SVOC	TOC		
CS029	Lake Roosevelt north of Summer Island	0 - 2"	01214116	MJ0915	JX458	CR-030-SD	X	X			X	21-May-01	1545
CS030	Lake Roosevelt on flats at Evans Campground	0 - 1"	01214118	MJ0916	JX459	CR-031-SD	X	X			X	21-May-01	1645
CS031	Lake Roosevelt east of Snag Cove	0 - 2"	01214120	MJ0917	JX460	CR-032-SD	X	X			X	21-May-01	1800
CS032	Lake Roosevelt on flats south of Bossburg	0 - 1"	01214122	MJ0918	JX461	CR-033-SD	X	X			X	22-May-01	1000
CS033	Lake Roosevelt on flats north of Bossburg	0 - 5"	01214124	MJ0919	JX462	CR-034-SD	X	X			X	22-May-01	1100
CS034	Lake Roosevelt on flats south of North Gorge (east bank)	0 - 1"	01214128	MJ0921	JX464	CR-036-SD	X	X			X	22-May-01	1400
CS035	Lake Roosevelt on flats south of North Gorge (west bank)	0 - 0.25 "	01214126	MJ0920	JX463	CR-035-SD	X	X			X	22-May-01	1200
CS036	Lake Roosevelt east of Flat Creek (north bank)	0 - 2"	01214130	MJ0922	JX465	CR-037-SD	X	X			X	22-May-01	1500
CS037	Lake Roosevelt at China Bar	0 - 2"	01214132	MJ0923	JX466	CR-038-SD	X	X			X	22-May-01	1630
CS038	Lake Roosevelt near navigation light south of Crown Creek	0 - 3"	01214134	MJ0924	JX467	CR-039-SD	X	X			X	23-May-01	1015
CS039	Lake Roosevelt north of Rattlesnake Creek (east bank)	0 - 4"	01214136	MJ0925	JX468	CR-040-SD	X	X			X	23-May-01	1130
CS040	Lake Roosevelt north of Onion Creek	0 - 2"	01214138	MJ0926	JX469	CR-041-SD	X	X			X	23-May-01	1245
CS041	Upper Columbia River southern tip of island northwest of Onion Creek	0 - 3"	01214140	MJ0927	JX470	CR-042-SD	X	X			X	23-May-01	1330
CS042	Upper Columbia River southern tip of island south of Squaw Creek	0 - 2"	01214142	MJ0928	JX471	CR-043-SD	X	X			X	23-May-01	1400
CS043	Upper Columbia River north of Fivemile Creek	0 - 2"	01214144	MJ0929	JX472	CR-044-SD	X	X			X	23-May-01	1515
CS044	Upper Columbia River on beach at Northport	0 - 4"	01224150	MJ0930	JX473	CR-045-SD	X	X			X	31-May-01	1045

Table 1-2—Sample Analytical Requirements

Station ID	Station Description	Sample Interval (below media surface)	Sample Identification				Analyses					Sample Date	Sample Time
			Regional Tracking #	Inorganic CLP #	Organic CLP #	Internal Sample ID	TAL Metals	Pest/PCB	VOC	SVOC	TOC		
CS045	Upper Columbia River north of Big Sheep Creek	0 - 3"	01224151	MJ0931	JX474	CR-046-SD	X	X			X	31-May-01	1215
CS046	Upper Columbia River south of Steamboat Rock	0 - 1"	01224154	MJ0932	JX475	CR-047-SD	X	X			X	31-May-01	1430
CS047	Upper Columbia River northeast of Steamboat Rock	0 - 1"	01224155	MJ0933	JX476	CR-048-SD	X	X			X	31-May-01	1515
CS048	Upper Columbia River north of Goodeve Creek	0 - 3"	01224157	MJ0934	JX477	CR-049-SD	X	X			X	31-May-01	1630
CS049	Upper Columbia River on point bar southwest of Scriver Creek	0 - 2"	01224160	MJ0935	JX478	CR-050-SD	X	X			X	01-Jun-01	930
CS050	Upper Columbia River south of Tom Bush Creek	0 - 2"	01224162	MJ0936	JX479	CR-051-SD	X	X			X	01-Jun-01	1145
CS051	Upper Columbia River at "Black Sand Beach"	0 - 4"	01224163	MJ0937	JX480	CR-052-SD	X	X			X	01-Jun-01	1230
CS052	Upper Columbia River on boulder bar near border	0 - 3"	01224164	MJ0938	JX481	CR-053-SD	X	X			X	01-Jun-01	1415
TS001	Unnamed, T32N R37E, Section 8	0 - 2"	01234079	MJ0BJ4		TR-056-SD	X					05-Jun-01	1000
TS002	Unnamed, Clover Leaf Beach Campground	0 -0.5"	01234080	MJ0BJ5		TR-057-SD	X					05-Jun-01	1045
TS003	Unnamed, T32N R37E, Section 8 (northern tributary)	0 - 3"	01234053	MJ09E4		TR-058-SD	X					03-Jun-01	1500
TS004	Stranger Creek (west)	0 - 3"	01234081	MJ0BJ6	JX570	TR-059-SD	X	X			X	05-Jun-01	1145
TS005	Hall Creek	0 - 2"	01234052	MJ09E6	JX559	TR-061-SD	X	X			X	03-Jun-01	1315
TS006	Cobbs Creek	0 - 2"	01234082	MJ0BJ7		TR-062-SD	X					05-Jun-01	1245
TS007	Unnamed, T33N, R37E, Section 28	0 - 4"	01234054	MJ09E5	JX558	TR-060-SD	X	X			X	04-Jun-01	1430
TS008	Unnamed, T33N, R37E, Section 30	0 - 1"	01234083	MJ0BJ8		TR-064-SD	X					05-Jun-01	1400
TS009	unproposed sampling location	0 - 3"	01234055	MJ09E8		TR-063-SD	X					04-Jun-01	1645
TS010	Unnamed, T33N, R37E, Section 21	0 - 3"	01234058	MJ09E7		TR-065-SD	X					04-Jun-01	1550

Table 1-2—Sample Analytical Requirements

Station ID	Station Description	Sample Interval (below media surface)	Sample Identification				Analyses					Sample Date	Sample Time
			Regional Tracking #	Inorganic CLP #	Organic CLP #	Internal Sample ID	TAL Metals	Pest/PCB	VOC	SVOC	TOC		
TS011	Unnamed, T33N, R37E, Section 19	0 - 2"	01234084	MJ0BJ9		TR-066-SD	X					05-Jun-01	1445
TS012	Unnamed, T33N, R37E, Section 18	0 - 3"	01234051	MJ09F0		TR-068-SD	X					03-Jun-01	1045
TS013	Magee Creek	0 - 4"	01234056	MJ09E9		TR-067-SD	X					04-Jun-01	1245
TS014	Jennings Creek	0 - 3"	01234057	MJ09F1		TR-069-SD	X					04-Jun-01	1400
TS015	Little Jim Creek	0 - 2"	01234050	MJ09F2		TR-070-SD	X					03-Jun-01	935
TS016	Unnamed, T33N R36E, Section 1	0 - 1"	01234096	MJ0BK8		TR-071-SD	X					05-Jun-01	1545
TS017	Unnamed, T33N R37E, Section 4	0 - 1"	01234097	MJ0BK9		TR-072-SD	X					05-Jun-01	1630
TS018	Unnamed, T33N R37E, Section 5	0 - 1"	01234098	MJ0BL0		TR-073-SD	X					06-Jun-01	945
TS019	Unnamed, T34N R37E, Section 32	0 - 2"	01234085	MJ09F3		TR-074-SD	X					06-Jun-01	1030
TS020	Unnamed, T34N R36E, Section 36	0 - 2.5"	01234059	MJ09F4		TR-075-SD	X					03-Jun-01	1030
TS021	Unnamed, T34N R36E, Section 25	0 - 1.5"	01234060	MJ09F5		TR-076-SD	X					03-Jun-01	1100
TS022	Cheweka Creek	0 - 2"	01234099	MJ0BL1	JX571	TR-077-SD	X	X			X	06-Jun-01	1100
TS023	Unnamed, T34N, R37E, Section 29 (north of Cheweka Creek)	0 - 1.5"	01234100	MJ0BL2		TR-078-SD	X					06-Jun-01	1215
TS024	Unnamed, T34N, R37E, Section 29 (NW qtr)	0 - 3"	01234101	MJ0BL3		TR-079-SD	X					06-Jun-01	1300
TS025	Unnamed, T34N, R37E, Section 20	0 - 5"	01234102	MJ0BL4		TR-080-SD	X					06-Jun-01	1330
TS026	Barnaby Creek	0 - 2"	01234061	MJ09F6		TR-081-SD	X					03-Jun-01	1300
TS027	Rotter Bay Creek	0 - 3"	01234064	MJ09F7		TR-082-SD	X					04-Jun-01	1200
TS028	Quillisascut Creek	0 - 2"	01234086	MJ09F8		TR-083-SD	X					06-Jun-01	1415
TS029	Unnamed, T34N, R36E, Section 11	0 - 1"	01234062	MJ09F9		TR-084-SD	X					03-Jun-01	1345
TS030	Unnamed, T34N, R37E, Section 6	0 - 1.5"	01234087	MJ09G0		TR-085-SD	X					06-Jun-01	1515
TS031	Cuba Canyon Creek	0 - 8"	01234103	MJ0BL5	JX572	TR-086-SD	X	X			X	06-Jun-01	1600
TS032	Unnamed, T35N, R37E, Section 31	0 - 2"	01234112	MJ0BM4		TR-087-SD	X					07-Jun-02	915

Table 1-2—Sample Analytical Requirements

Station ID	Station Description	Sample Interval (below media surface)	Sample Identification				Analyses					Sample Date	Sample Time
			Regional Tracking #	Inorganic CLP #	Organic CLP #	Internal Sample ID	TAL Metals	Pest/PCB	VOC	SVOC	TOC		
TS033	La Fleur Creek	0 - 2"	01234063	MJ09G1		TR-088-SD	X					03-Jun-01	1450
TS034	Unnamed, T36N, R37E, Section 32	0 - 3"	01234113	MJ0BM5		TR-089-SD	X					07-Jun-01	1000
TS035	Unnamed, T36N, R37E, Section 33 (southwest qtr); drains Nettleton Lake	0 - 4"	01234128	MJ0BK8		TR-128-SD	X					09-Jun-01	1500
TS036	Unnamed, T35N, R37E, Section 33 (northwest qtr)	0 - 6"	01234129	MJ0BK9	JX793	TR-129-SD	X	X			X	09-Jun-01	1530
TS037	unproposed sampling location	0 - 4"	01234067	MJ09G2		TR-090-SD	X					04-Jun-01	930
TS038	Unnamed, T35N, R37E, Section 22 (south of Bradbury campground)	0 - 3"	01234068	MJ09G3	JX560	TR-091-SD	X	X			X	04-Jun-01	1030
TS039	Martin Creek	0 - 2"	01234114	MJ0BM6		TR-093-SD	X					07-Jun-01	1030
TS040	Unnamed, T35N, R37E, Section 15 (north of Bradbury campground)	0 - 3"	01234071	MJ09G6		TR-094-SD	X					06-Jun-01	1200
TS041	Roper Creek	0 - 2"	01234115	MJ0BM7		TR-095-SD	X					07-Jun-01	1130
TS042	Rickey Creek	0 - 1"	01234116	MJOBM8		TR-096-SD	X					07-Jun-01	1300
TS043	Cougar Canyon Creek	0 - 4"	01234072	MJ09G7		TR-097-SD	X					04-Jun-01	1015
TS044	Hallam Creek	0 - 4"	01234106	MJ0BL8	JX573	TR-104-SD	X	X			X	06-Jun-01	1500
TS045	Unnamed ephemeral tributary west of Mingo Creek	0 - 7"	01234075	MJ09H0	JX564	TR-105-SD	X	X			X	04-Jun-01	1830
TS046	Mingo Creek	0 - 1.5"	01234076	MJ0BJ1	JX565	TR-106-SD	X	X			X	04-Jun-01	1745
TS047	Colville River	0 - 2"	01234077	MJ0BJ2	JX566	TR-107-SD	X	X			X	04-Jun-01	1715
TS048	Sherman Creek	0 - 2"	01234073	MJ09G8	JX562	TR-098-SD	X	X			X	04-Jun-01	1105
TS049	Unnamed, T36N, R37E, Section 22, SE qtr	0 - 2"	01234117	MJ0BM9		TR-099-SD	X					07-Jun-01	1645
TS050	Unmapped tributary adjacent to TS051	0 - 3"	01234136	MJ0BJ4		TR-125-SD	X					09-Jun-01	1730
TS051	Unnamed, T36N, R37E, Section 22, NE qtr	0 - 3"	01234118	MJ0BN0		TR-100-SD	X					07-Jun-01	1600
TS052	Unnamed, T36N, R37E, Section 15, SE qtr, western trib	0 - 4"	01234104	MJ0BL6		TR-101-SD	X					07-Jun-01	1500

Table 1-2—Sample Analytical Requirements

Station ID	Station Description	Sample Interval (below media surface)	Sample Identification				Analyses					Sample Date	Sample Time
			Regional Tracking #	Inorganic CLP #	Organic CLP #	Internal Sample ID	TAL Metals	Pest/PCB	VOC	SVOC	TOC		
TS053	Unnamed, T36N, R37E, Section 15, SE qtr, eastern trib	0 - 2"	01234119	MJ0BN1		TR-102-SD	X					07-Jun-01	1430
TS054	Unnamed, T36N, R37E, Section 14, SW qtr	0 - 2"	01234120	MJ0BN2		TR-103-SD	X					07-Jun-01	1400
TS055	Unnamed, ephemeral tributary, T36N, R38E, Section 18, SW qtr	0 - 1"	01234078	MJ0BJ3		TR-108-SD	X					04-Jun-01	1300
TS056	Martin Spring Creek	0 - 1.5"	01234107	MJ0BL9	JX574	TR-109-SD	X	X			X	06-Jun-01	1645
TS057	Pingston Creek	0 - 3"	01234108	MJ0BM0	JX791	TR-110-SD	X	X			X	06-Jun-01	1600
TS058	Nancy Creek	0 - 4"	01234109	MJ0BM1		TR-111-SD	X					06-Jun-01	1400
TS059	Unnamed ephemeral tributary at T37N, R37E, Section 33	0 - 5"	01234121	MJOBJ1		TR-112-SD	X					09-Jun-01	1645
TS060	Unnamed tributary T37N, R37E, Section 16, southwest qtr	0 - 1"	01234065	MJ09F8		TR-113-SD	X					06-Jun-01	900
TS061	Unnamed ephemeral tributary at T37N, R37E, Section 22	0 - 3"	01234110	MJ0BM2		TR-123-SD	X					06-Jun-01	1245
TS062	Unnamed, across from Marcus Island T37N, R37E, Section 23	0 - 7"	01234111	MJ0BM3		TR-124-SD	X					06-Jun-01	1130
TS063	Unnamed ephemeral tributary at T37N, R38E, Section 28	0 - 4"	01234123	MJ0BK3	JX803	TR-126-SD	X	X			X	08-Jun-01	1615
TS064	Unnamed ephemeral tributary at T37N, R38E, Section 22 (SW qtr)	0 - 3.5"	01234127	MJ0BK7	JX807	TR-037-SD	X	X			X	08-Jun-01	1120
TS065	Unnamed ephemeral tributary at T37N, R38E, Section 22 (NW qtr)	0 - 1"	01234125	MJ0BK5	JX805	TR-038-SD	X	X			X	08-Jun-01	1130
TS066	Unnamed, spring drainage east of Evans Campground peninsula	0 - 1.5"	01234126	MJ0BK6		TR-039-SD	X					08-Jun-01	1245
TS067	Deadman Creek	0 - 2"	01234066	MJ09G0	JX567	TR-114-SD	X	X			X	05-Jun-01	1345
TS068	Unnamed ephemeral tributary, T37N, R37E, Section 16, northwest qtr	0 - 1"	01234088	MJ0BK0		TR-115-SD	X					06-Jun-01	1030

Table 1-2—Sample Analytical Requirements

Station ID	Station Description	Sample Interval (below media surface)	Sample Identification				Analyses					Sample Date	Sample Time
			Regional Tracking #	Inorganic CLP #	Organic CLP #	Internal Sample ID	TAL Metals	Pest/PCB	VOC	SVOC	TOC		
TS069	Unnamed tributary to Kettle River Arm, draining pond near Boyds	0 - 3"	01234092	MJ0BK4		TR-119-SD	X					05-Jun-01	1320
TS070	Unnamed ephemeral tributary, T37N, R37E, Section 9, NW qtr, SE qtr	0 - 8"	01234089	MJ0BK1		TR-116-SD	X					05-Jun-01	1530
TS071	Unnamed ephemeral tributary, T37N, R37E, Section 9, NW qtr, NE qtr	0 - 2"	01234090	MJ0BK2		TR-117-SD	X					05-Jun-01	1600
TS072	Unnamed ephemeral tributary, T37N, R38E, Section 4, NE qtr	0 - 3"	01234091	MJ0BK3	JX568	TR-118-SD	X	X			X	05-Jun-01	1430
TS073	Matsen Creek	0 - 3"	01234093	MJ0BK5		TR-120-SD	X					05-Jun-01	1145
TS074	Doyle Creek	0 - 5"	01234094	MJ0BK6		TR-121-SD	X					05-Jun-01	1100
TS075	Kettle River	0 - 2"	01234095	MJ0BK7	JX569	TR-122-SD	X	X			X	05-Jun-01	945
TS076	China Creek	0 - 1"	01214101	MJ0952		TR-001-SD	X					21-May-01	1715
TS077	Unnamed tributary south of Snag Cove	0 - 1"	01214103	MJ0953		TR-002-SD	X					22-May-01	1045
TS078	Unnamed ephemeral tributary at T38N, R37E, Section 36 (SW qtr)	0 - 1"	01214105	MJ0954		TR-005-SD	X					22-May-01	1345
TS079	Unnamed ephemeral tributary entering river at T38N, R37E,Section 35 (NE qtr)	0 - 1"	01214107	MJ0955		TR-004-SD	X					22-May-01	1455
TS080	Unnamed tributary directly across from Bossburg, WA	0 - 1"	01214109	MJ0956		TR-006-SD	X					22-May-01	1550
TS081	Dilly Lake ephemeral tributary	0 - 1"	01214111	MJ0957		TR-007-SD	X					22-May-01	1705
TS082	Unnamed ephemeral tributary upstream of Dilly Lake ephemeral tributary	0 - 1"	01214113	MJ0958		TR-008-SD	X					22-May-01	1735
TS083	Unnamed ephemeral tributary at T38N, R38E, Section 21	0 - 2"	01214115	MJ0959		TR-009-SD	X					23-May-01	1100

Table 1-2—Sample Analytical Requirements

Station ID	Station Description	Sample Interval (below media surface)	Sample Identification				Analyses					Sample Date	Sample Time
			Regional Tracking #	Inorganic CLP #	Organic CLP #	Internal Sample ID	TAL Metals	Pest/PCB	VOC	SVOC	TOC		
TS084	Unnamed ephemeral tributary at T38N, R38E, Section 22	0 - 2"	01214117	MJ0960		TR-010-SD	X					23-May-01	1220
TS085	Unnamed ephemeral tributary at North Gorge Campground	0 -.5"	01214119	MJ0961		TR-011-SD	X					23-May-01	1410
TS086	Unnamed ephemeral tributary at T38N, R38E,Section 17 (NW qtr)	missing sample log	01214121	MJ0962		TR-012-SD	X					23-May-01	1445
TS087	Unnamed ephemeral tributary downstream of Lodgepole Cr at T38N, R38E,Section 8 (NW qtr)	0 - 1"	01214123	MJ0963		TR-013-SD	X					23-May-01	1555
TS088	Lodgepole Creek	0 - 1"	01214125	MJ0964		TR-014-SD	X					23-May-01	1640
TS089	Unnamed ephemeral tributary at T38N, R38E, Section 10	0 - 2"	01214129	MJ0968		TR-016-SD	X					23-May-01	1645
TS090	Fifteenmile Creek	0 - 3"	01234137	MJ0BJ5	JX795	TR-040-SD	X	X			X	08-Jun-01	1645
TS091	Unnamed ephemeral tributary at Flat Creek	0 - 6"	01234143	MJ0BJ2		TR-127-SD	X					08-Jun-01	1545
TS092	Flat Creek	0 - 1"	01234138	MJ0BJ6	JX796	TR-041-SD	X	X			X	08-Jun-01	1500
TS093	Unnamed ephemeral tributary downstream of China Bar	0 - 2"	01214127	MJ0967		TR-017-SD	X					24-May-01	1215
TS094	Unnamed ephemeral tributary at T39N, R39E, Section 25 (SW qtr)	0 - 3"	01214131	MJ0969		TR-018-SD	X					24-May-01	1300
TS095	Crown Creek	0 - 2"	01214133	MJ0970		TR-019-SD	X					24-May-01	1345
TS096	Rattlesnake Creek	0 - 5"	01234139	MJ0BJ7	JX797	TR-042-SD	X	X			X	08-Jun-01	1145
TS097	Unnamed ephemeral tributary downstream from Moses Spring Creek	0 - 3"	01214135	MJ0971		TR-020-SD	X					24-May-01	1615
TS098	Moses Spring Creek	0 - 3"	01214137	MJ0972		TR-022-SD	X					24-May-01	1530
TS099	Onion Creek	0 - 4"	01234140	MJ0BJ8	JX798	TR-043-SD	X	X			X	08-Jun-01	1300
TS100	Unnamed ephemeral tributary in T39N, R39E, Section 10	0 - 1.5"	01214139	MJ0973		TR-023-SD	X					24-May-01	1435
TS101	Squaw Creek	0 - 4 "	01234141	MJ0BJ9	JX799	TR-044-SD	X	X			X	09-Jun-01	1030

Table 1-2—Sample Analytical Requirements

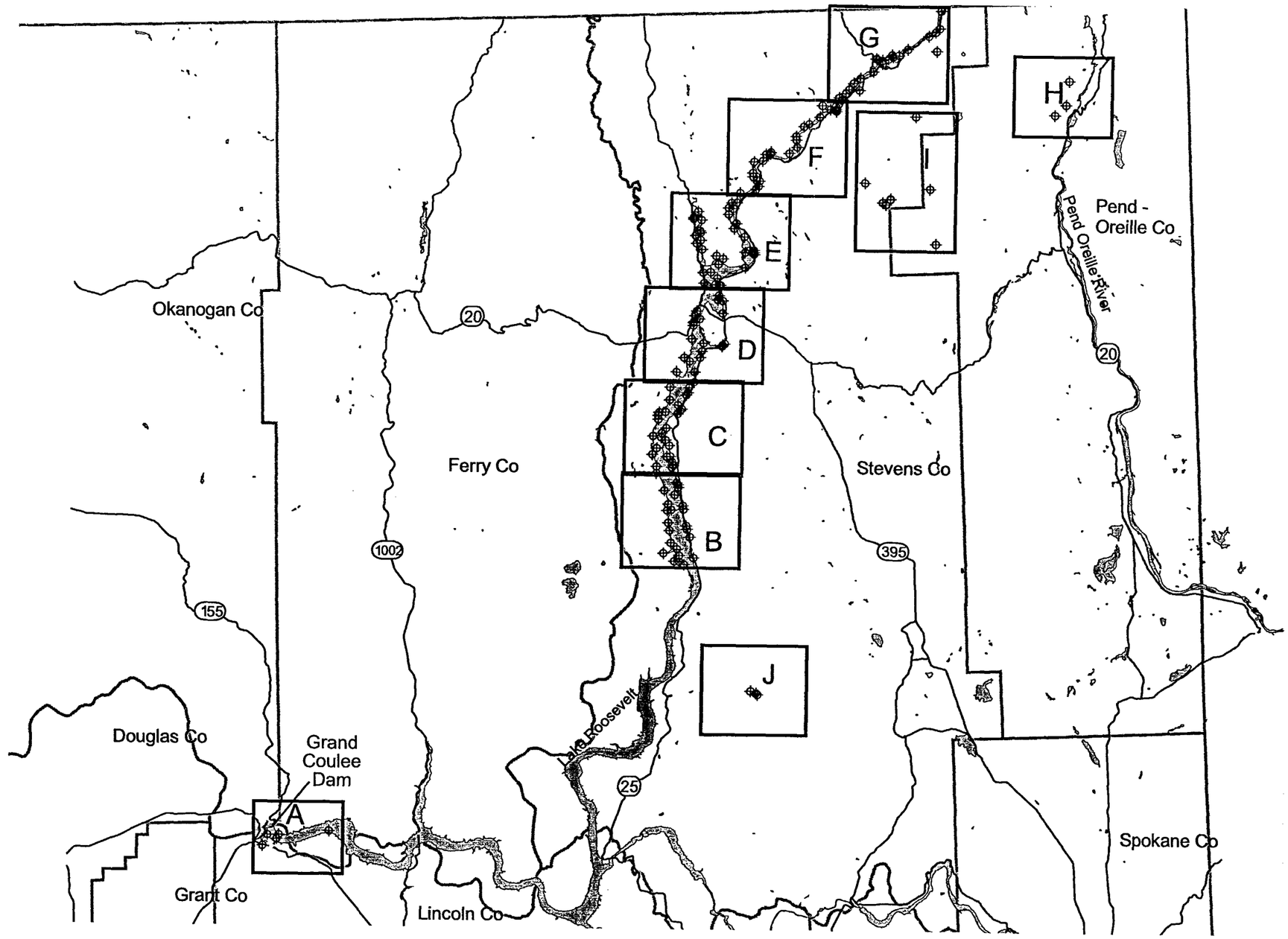
Station ID	Station Description	Sample Interval (below media surface)	Sample Identification				Analyses					Sample Date	Sample Time
			Regional Tracking #	Inorganic CLP #	Organic CLP #	Internal Sample ID	TAL Metals	Pest/PCB	VOC	SVOC	TOC		
TS102	Unnamed tributary from nearshore ponds	0 - 1"	01214141	MJ0974		TR-024-SD	X					24-May-01	1325
TS103	Fivemile Creek	0 - 3"	01214143	MJ0975		TR-025-SD	X					24-May-01	1145
TS104	Bear Creek	0 - 2"	01234142	MJ0BK0	JX800	TR-045-SD	X	X			X	09-Jun-01	930
TS105	Deep Creek	0 - 4"	01234122	MJ0BK2	JX802	TR-047-SD	X	X			X	08-Jun-01	1000
TS106	Big Sheep Creek	0 - 2"	01224153	MJ0976	JX552	TR-026-SD	X	X			X	31-May-01	1345
TS107	Quartz Creek	0 - 4"	01224152	MJ0977		TR-027-SD	X					31-May-01	1300
TS108	Goodeve Creek	0 - 4.5"	01224156	MJ0978	JX553	TR-028-SD	X	X			X	31-May-01	1545
TS109	Scriver Creek	0 - 3"	01224161	MJ0979	JX554	TR-029-SD	X	X			X	01-Jun-01	1100
TS110	Unnamed tributary NE of Gaging Station	0 - 8 "	01224165	MJ0980	JX555	TR-030-SD	X	X			X	01-Jun-01	1330
US001	Tributary to Tom Bush Creek; Melrose Mine	0-3"	01264068	MJ0BQ1	JX827	BK-150-SD	X	X			X	27-Jun-01	900
US002	Flume Creek; Sullivan Mine	0-2"	01264070	MJ0BQ3	JX829	BK-152-SD	X	X			X	28-Jun-01	930
US003	Flume Creek South Fork	0-4"	01264073	MJ0BQ5	JX831	BK-153-SD	X	X			X	28-Jun-01	1045
US004	Linton Creek; Oriole Mine	0-2"	01264075	MJ0BQ7	JX832	BK-155-SD	X	X			X	28-Jun-01	1300
US005	Unnamed tributary to Onion Creek; Van Stone Mine	0-3"	01264050	MJ0BN3	JX810	BK-130-SD	X	X			X	25-Jun-01	945
US006	Unnamed tributary to Onion Creek; Van Stone Mine	0-3"	01264051	MJ0BN4	JX811	BK-131-SD	X	X			X	25-Jun-01	1315
US007	Van Stone Mine soil	0-4"	01264054	MJ0BN7	JX814	BK-134-SD	X	X		X		25-Jun-01	1445
US008	Van Stone Mine soil	0-6"	01264055	MJ0BN8	JX815	BK-135-SD	X	X		X		25-Jun-01	1500
US009	Van Stone Mine soil	0-8"	01264053	MJ0BN6	JX813	BK-133-SD	X	X		X		25-Jun-01	1300
US010	Unnamed tributary to Onion Creek; Van Stone Mine	0-4"	01264059	MJ0BP2	JX819	BK-139-SD	X	X			X	25-Jun-01	1215
US011	Tributary to Deep Creek; Last Chance Mine	0-10"	01264062	MJ0BP5	JX822	BK-142-SD	X	X			X	26-Jun-01	1615
US012	Deep Creek South Fork	0-1"	01264060	MJ0BP3	JX820	BK-140-SD	X	X			X	26-Jun-01	1230
US013	Unnamed tributary to Deep Creek	0-4"	01264058	MJ0BP1	JX818	BK-138-SD	X	X			X	26-Jun-01	1000
US014	Unnamed tributary to Hunters Creek; Cleveland Mine	0-3"	01264065	MJ0BP8	JX825	TR-147-SD	X	X			X	27-Jun-01	1630

Table 1-2—Sample Analytical Requirements

Station ID	Station Description	Sample Interval (below media surface)	Sample Identification				Analyses					Sample Date	Sample Time
			Regional Tracking #	Inorganic CLP #	Organic CLP #	Internal Sample ID	TAL Metals	Pest/PCB	VOC	SVOC	TOC		
US015	Unnamed tributary to Hunters Creek; Cleveland Mine	0-2"	01264072	MJ0BQ8	JX833	TR-145-SD	X	X			X	27-Jun-01	1515
US016	Unnamed tributary to Hunters Creek; Cleveland Mine	0-5"	01264056	MJ0BN9	JX816	TR-136-SD	X	X			X	27-Jun-01	1430
UW001	Tributary to Tom Bush Creek; Melrose Mine	0"	01264069	MJ0BQ2		BK-151-SW	X					27-Jun-01	930
UW002	Flume Creek-Sullivan Mine	0"	01264067	MJ0BQ0		BK-149-SW	X					28-Jun-01	945
UW003	Flume Creek South Fork	0"	01264074	MJ0BQ6		BK-154-SW	X					28-Jun-01	1055
UW004	Unnamed tributary to Onion Creek; Van Stone Mine	0"	01264052	MJ0BN5		BK-132-SW	X					25-Jun-01	1345
UW005	Tributary to Deep Creek; Last Chance Mine	0"	01264063	MJ0BP6		BK-143-SW	X					26-Jun-01	1600
UW006	Deep Creek South Fork	0"	01264061	MJ0BP4		BK-141-SW	X					26-Jun-01	1245
UW007	Unnamed tributary to Hunters Creek; Cleveland Mine	0"	01264066	MJ0BP9		TR-148-SW	X					27-Jun-01	1645
RW001	Kemmerer Bottle	NA (rinsate)	01204103	MJ08Y5	JX428	RS-001-SW	X	X	X	X		15-May-01	1120
RS001	Bowl and Spoon	NA (rinsate)	01224158	MJ0981	JX556	RS-001-SD	X	X				31-May-01	830
RS002	Dredge Sampler	NA (rinsate)	01224159	MJ0982	JX557	RS-002-SD	X	X				31-May-01	900
RS003	Hand Auger	NA (rinsate)	01234135	MJ0BJ3	JX792	RS-003-SD	X	X				08-Jun-01	800
RS004	Bowl and Spoon	NA (rinsate)	01264071	MJ0BQ4	JX830	R-004-SD	X	X				27-Jun-01	700
TB001	Grand Coulee	NA (trip blank)	01204108		JX547	TB-001-SW			X			14-May-01	11:45
TB002	Grand Coulee	NA (trip blank)	01204109		JX549	TB-002-SW			X			14-May-01	10:00

Notes:
CLP: Contract Laboratory Program
NA: Not applicable
Pest/PCB: Chlorinated pesticides and polychlorinated biphenyls
SVOC: Semivolatile organic compound
TAL Metals: Target analyte list metals
TOC: Total organic carbon
VOC: Volatile organic compound

FIGURES



EXPLANATION

Station Location

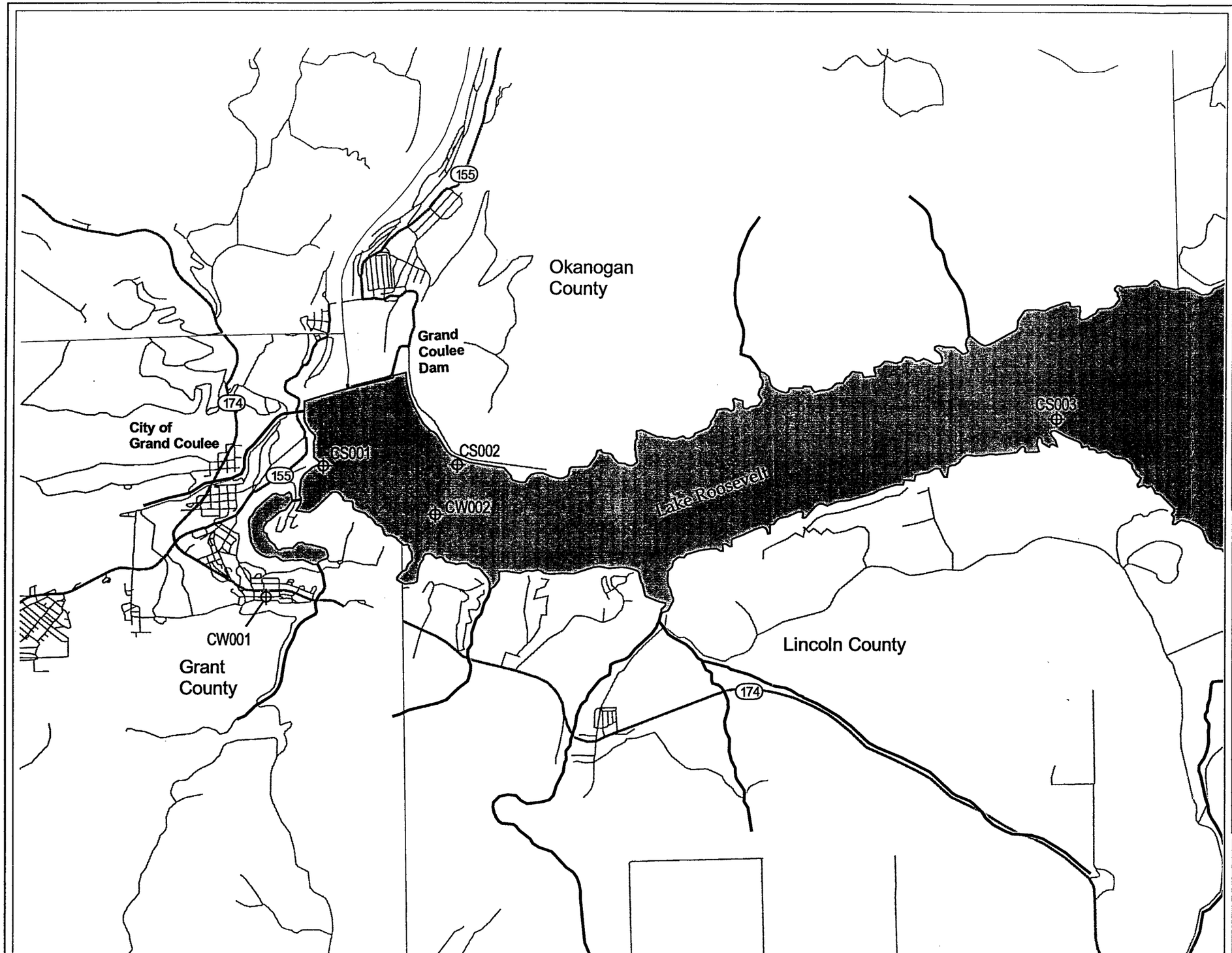
0 5 10
Scale in Miles

Columbia River/ Lake Roosevelt ESI Sample Station Locations Map Index

Figure
1

WESTON
MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig1.ai



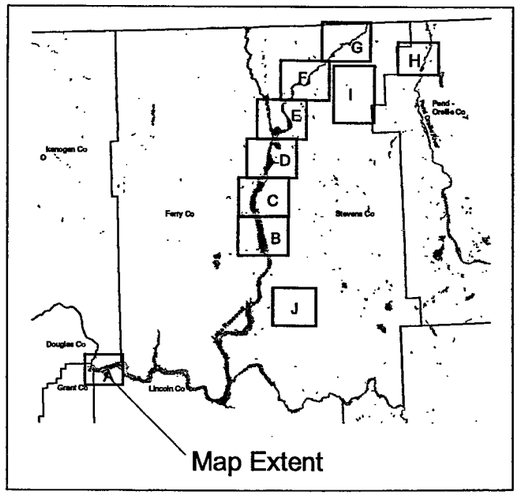
EXPLANATION

- Station Location
- Roads
- Streams
- County Line

N

0 2000 4000

Scale in Feet

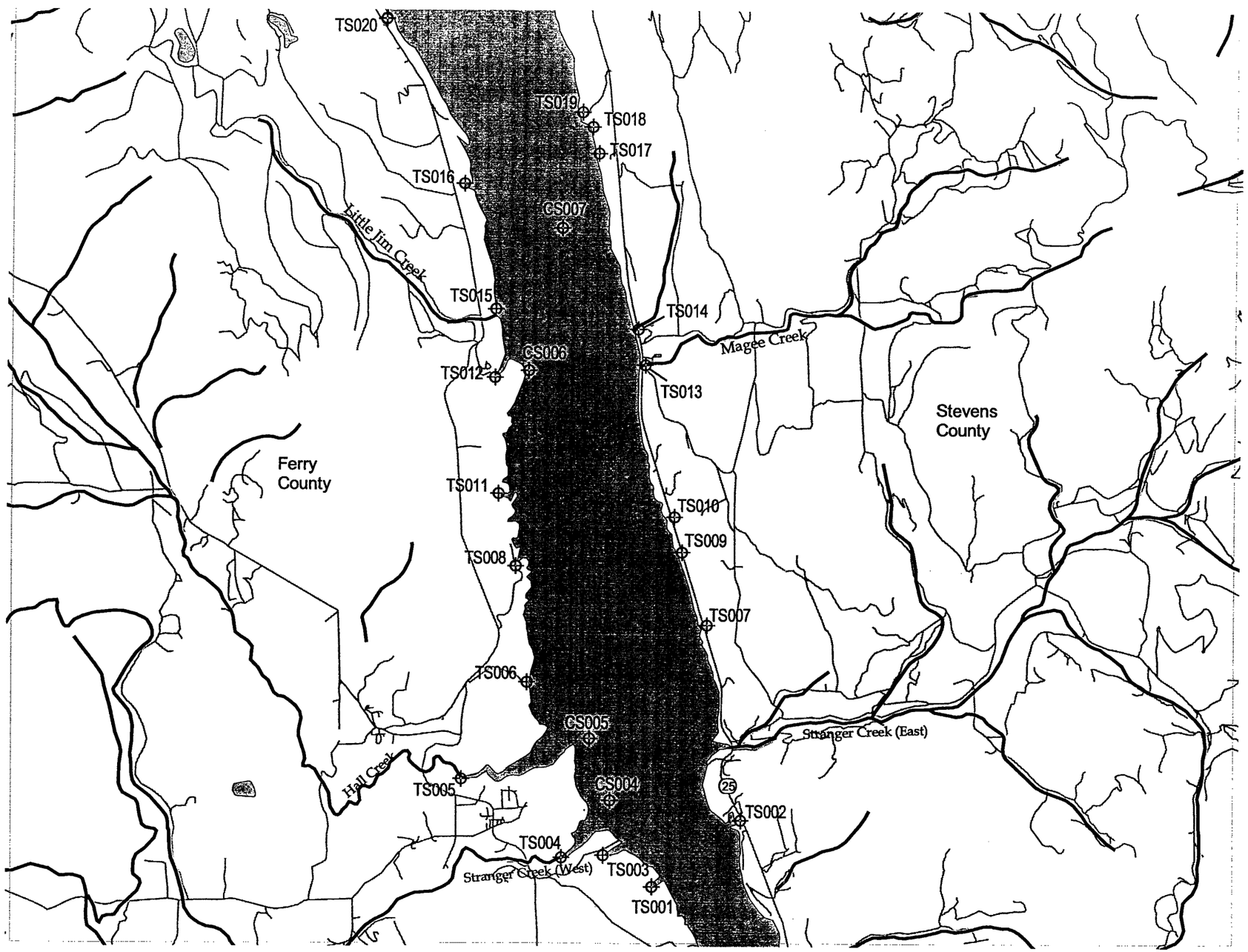


Columbia River/ Lake Roosevelt ESI Sample Station Locations Map A

Figure
1A

WESTON
MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig1A.ai



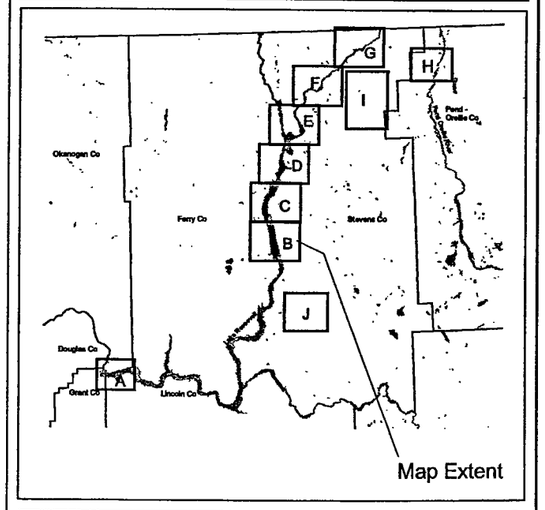
EXPLANATION

- Station Location
- Roads
- Streams
- County Line

N

0 2000 4000

Scale in Feet



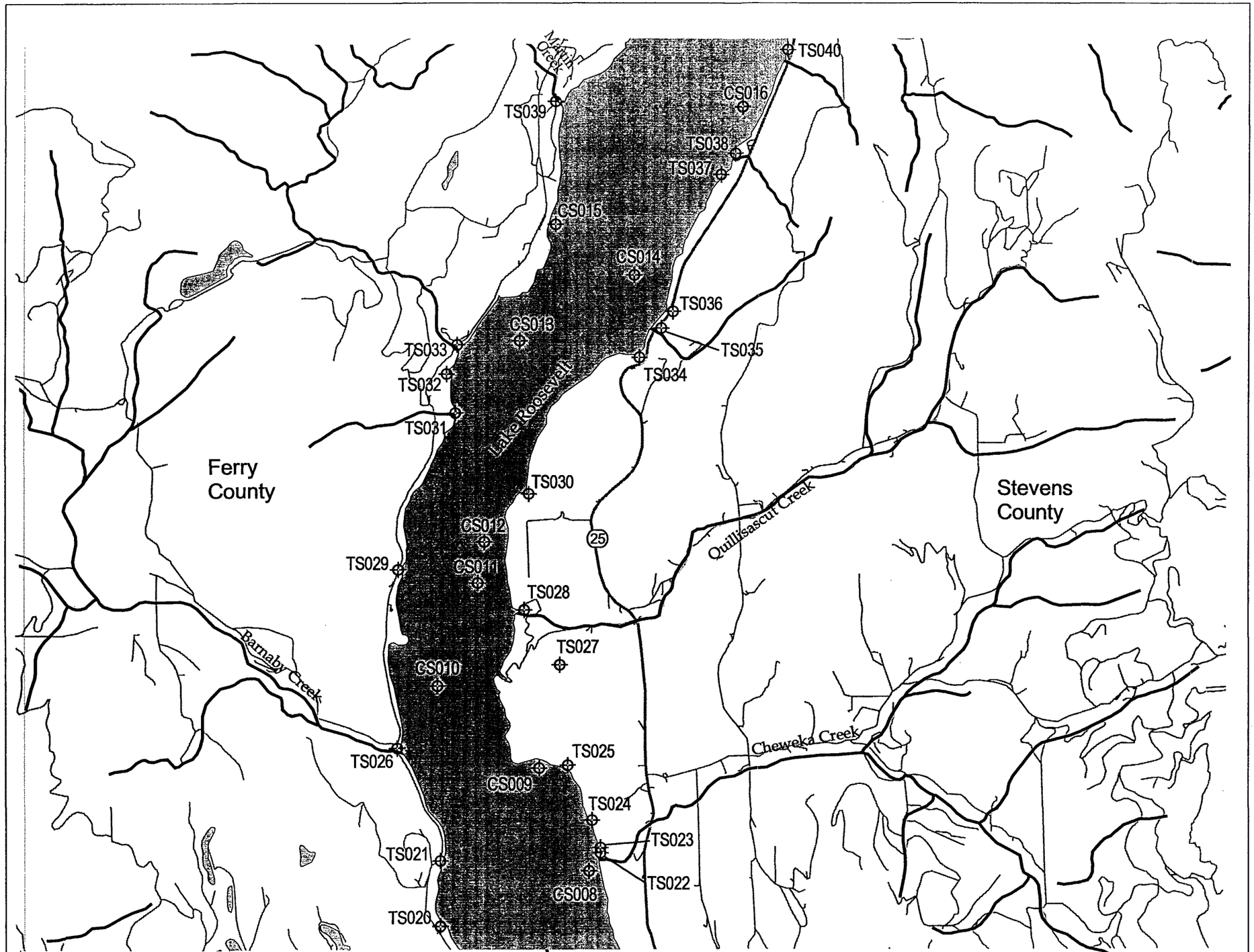
Map Extent

Columbia River/ Lake Roosevelt ESI Sample Station Locations Map B

Figure **1B**

WESTON MANAGERS DESIGNERS/CONSULTANTS

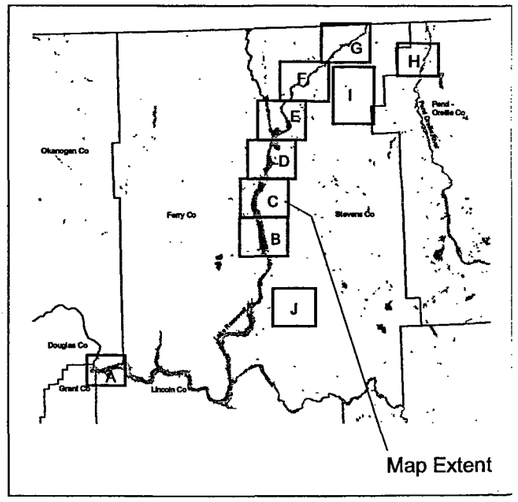
01-0381/TR Fig1B.ai



EXPLANATION

- Station Location
- Roads
- Streams
- County Line

0 2500 5000
Scale in Feet

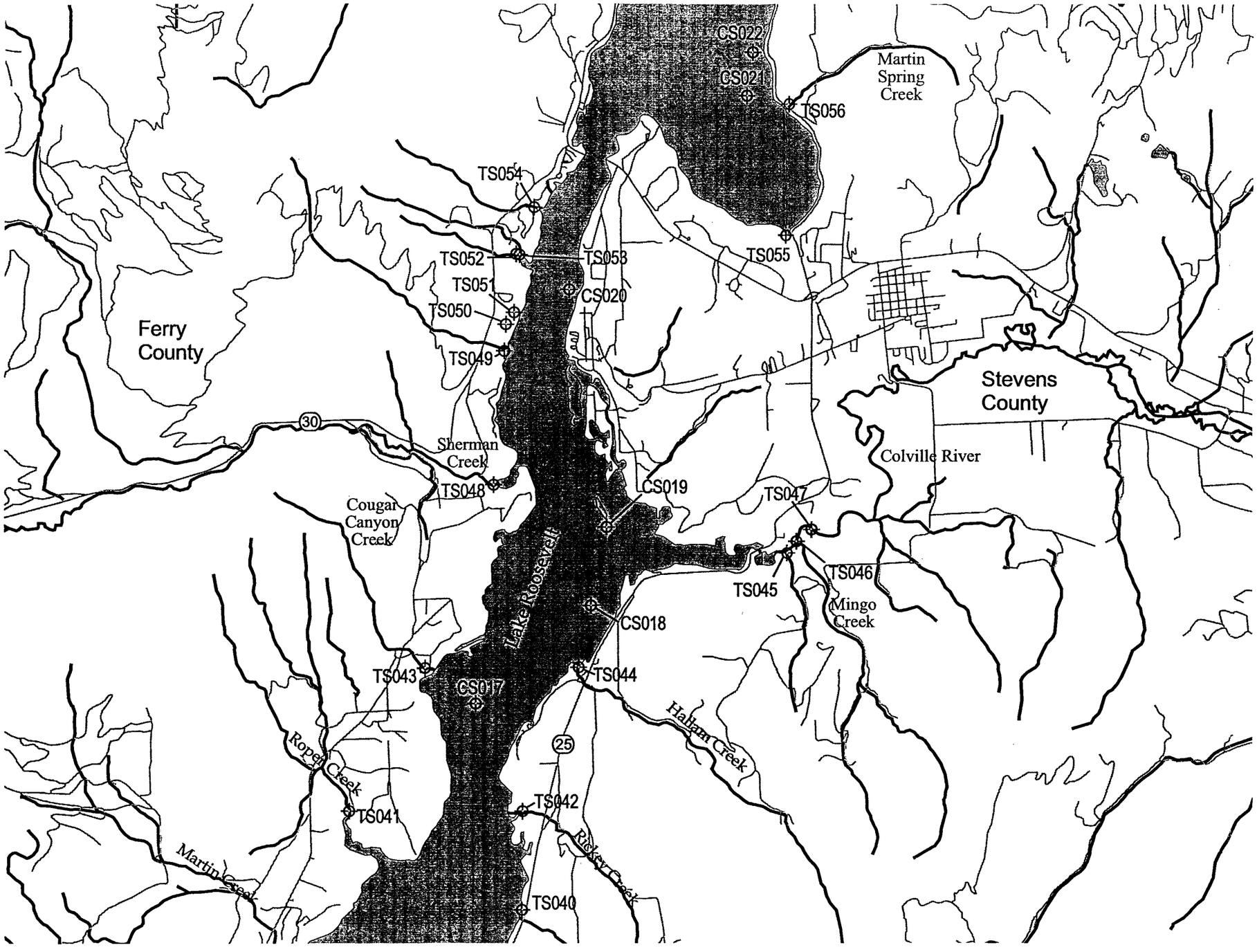


Columbia River/ Lake Roosevelt ESI Sample Station Locations Map C

Figure
1C

WESTON
MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig1C.ai



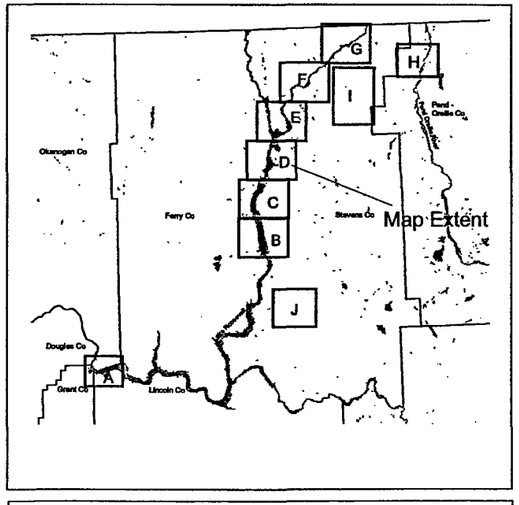
EXPLANATION

- Station Location
- Roads
- Streams
- County Line

N

0 2500 5000

Scale in Feet

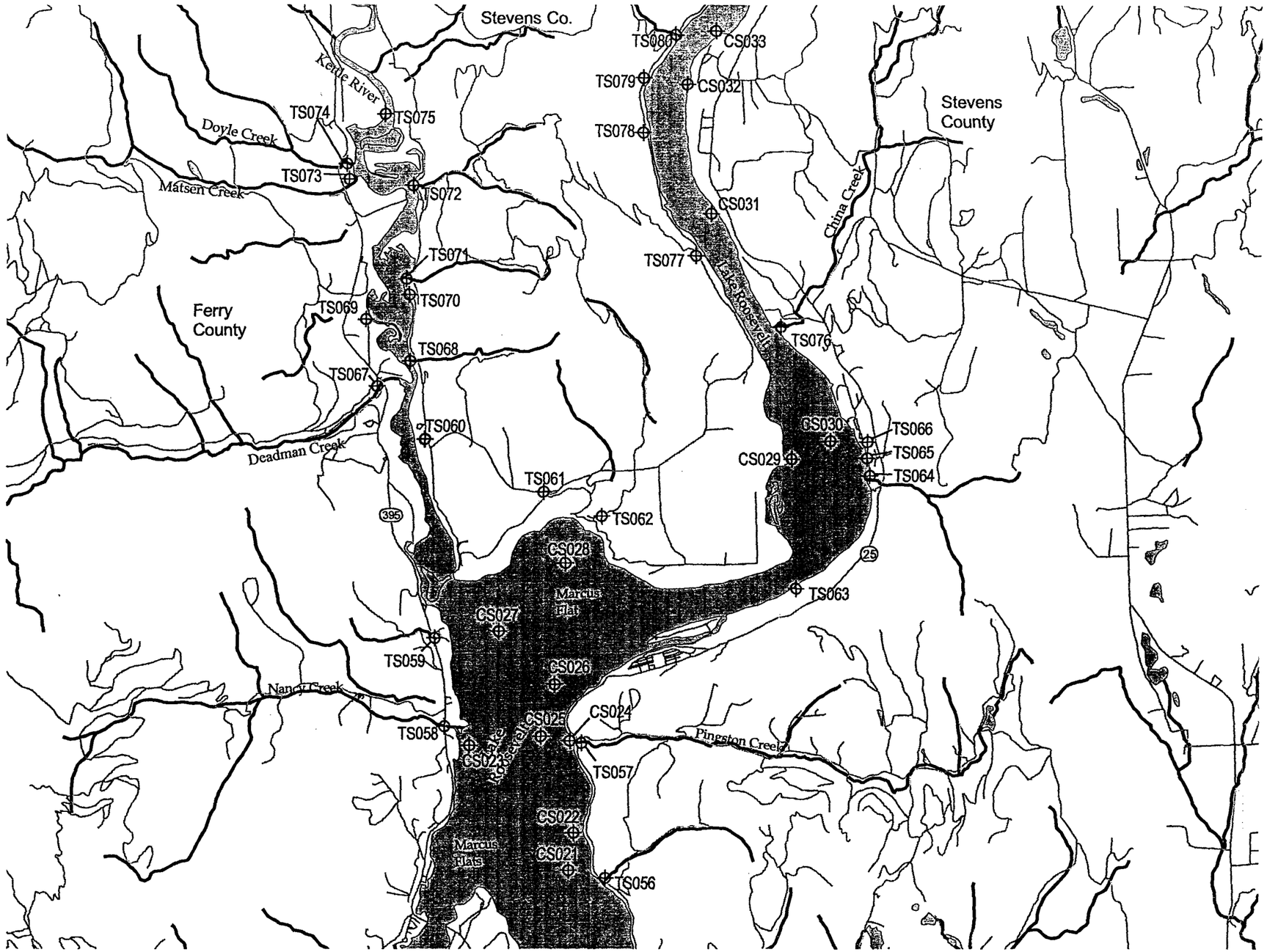


Columbia River/ Lake Roosevelt ESI Sample Station Locations Map D

Figure **1D**

WESTON
MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig1D.ai



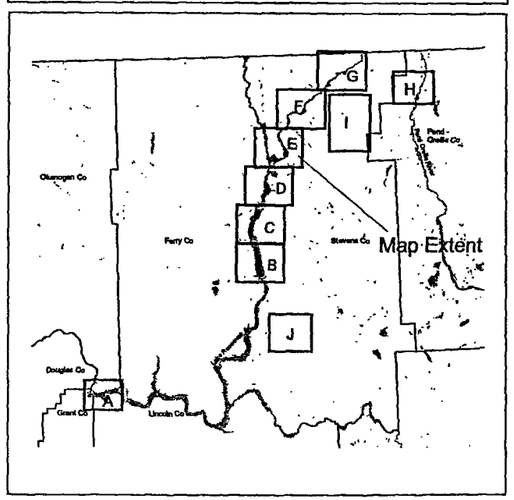
EXPLANATION

- Station Location
- Roads
- Streams
- County Line

N

0 3000 6000

Scale in Feet

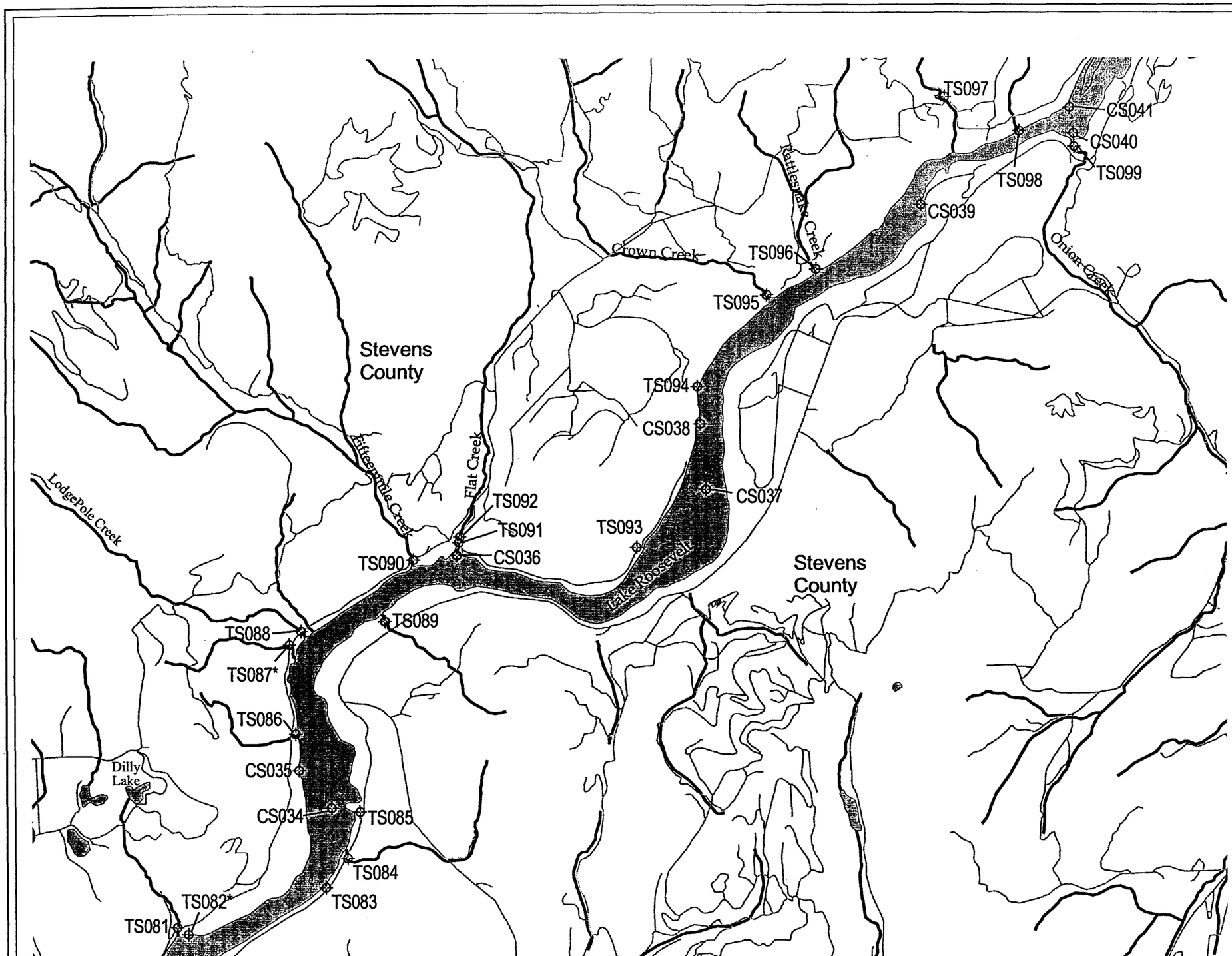


Columbia River/ Lake Roosevelt ESI Sample Station Locations Map E

Figure **1E**

WESTON MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig1E.ai

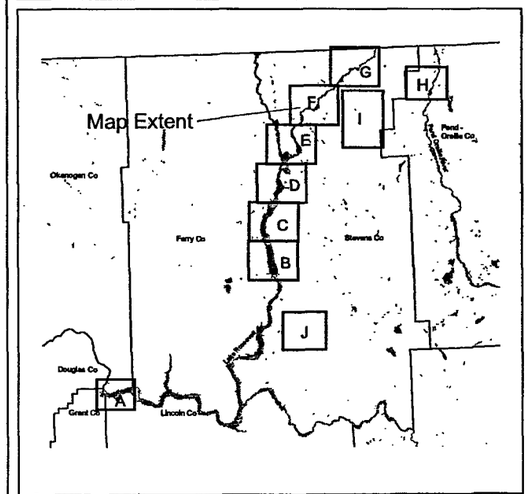


EXPLANATION

- Station Location
- Roads
- Streams
- County Line

* Location shown is based on uncorrected GPS data; corrected data unavailable.

0 2500 5000
Scale in Feet

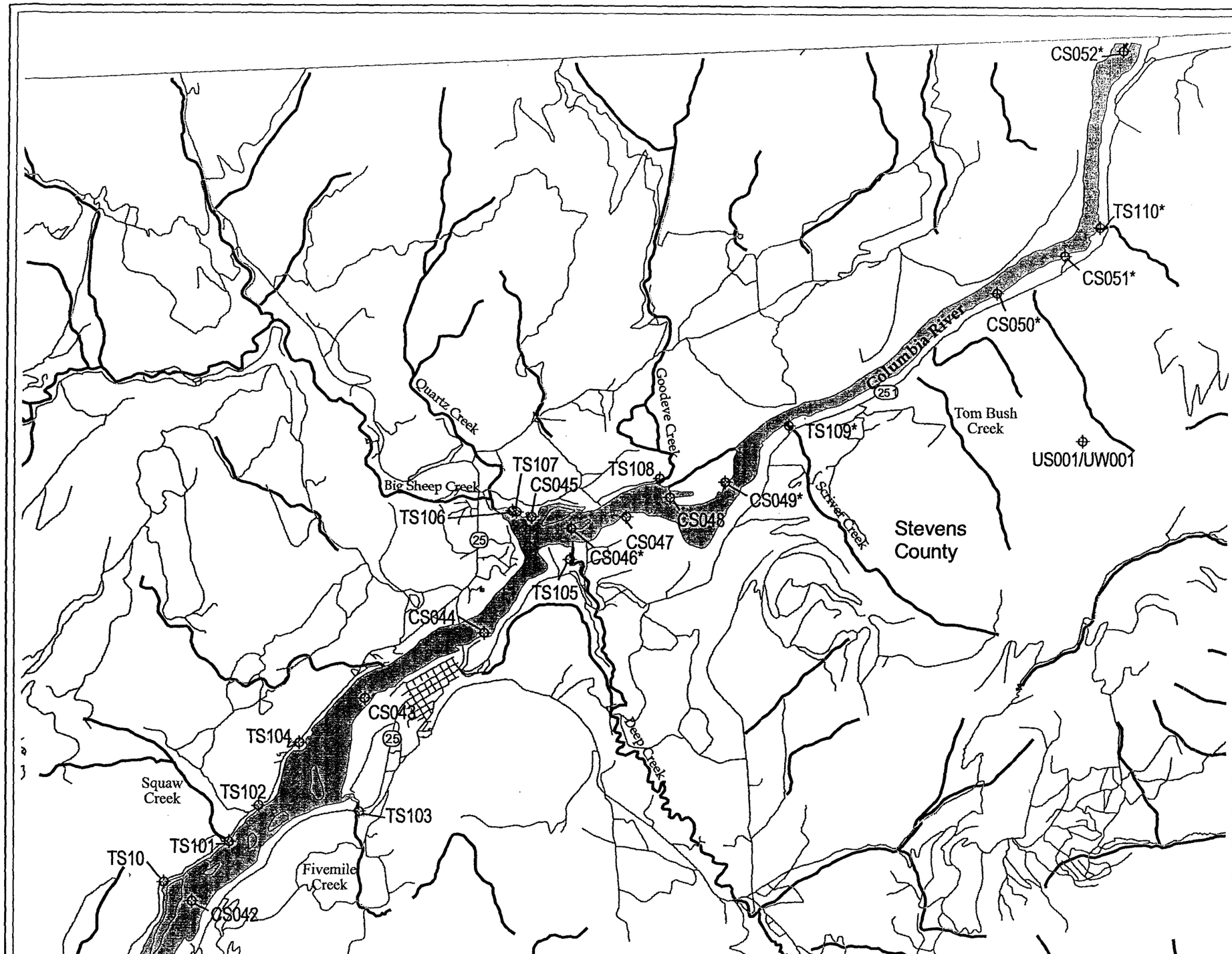


Columbia River/ Lake Roosevelt ESI Sample Station Locations Map F

Figure
1F

WESTON
MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig1F.ai



EXPLANATION

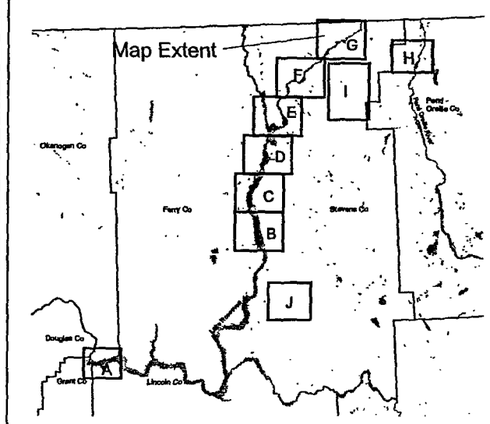
- Station Location
- Roads
- Streams
- County Line

* Location shown is not based on GPS data; Differentially corrected GPS data for this sample is unavailable.

N

0 2500 5000

Scale in Feet

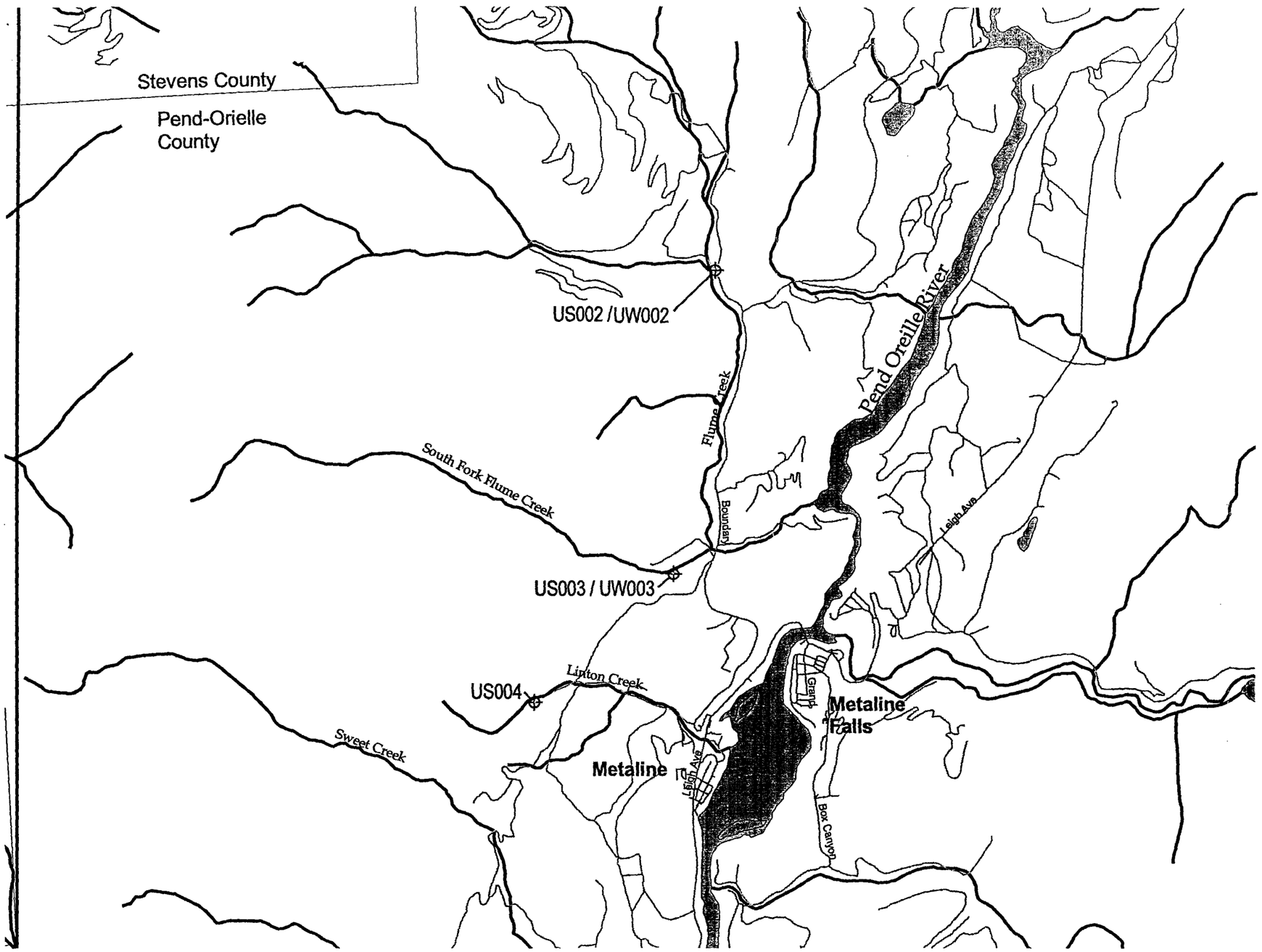


Columbia River/ Lake Roosevelt ESI Sample Station Locations Map G

Figure **1G**

WESTON MANAGERS DESIGNERS/CONSULTANTS

01-03817/TB Fig1G.ai



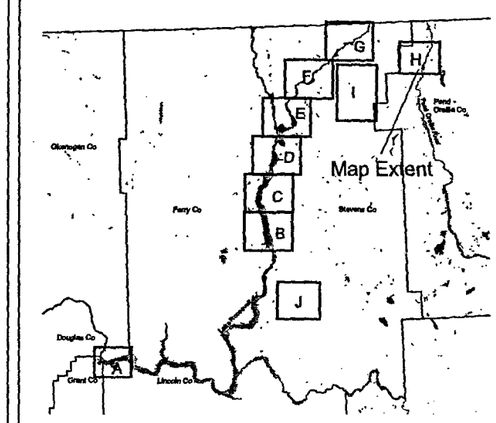
EXPLANATION

- Station Location
- Roads
- Streams
- County Line

N

0 2000 4000

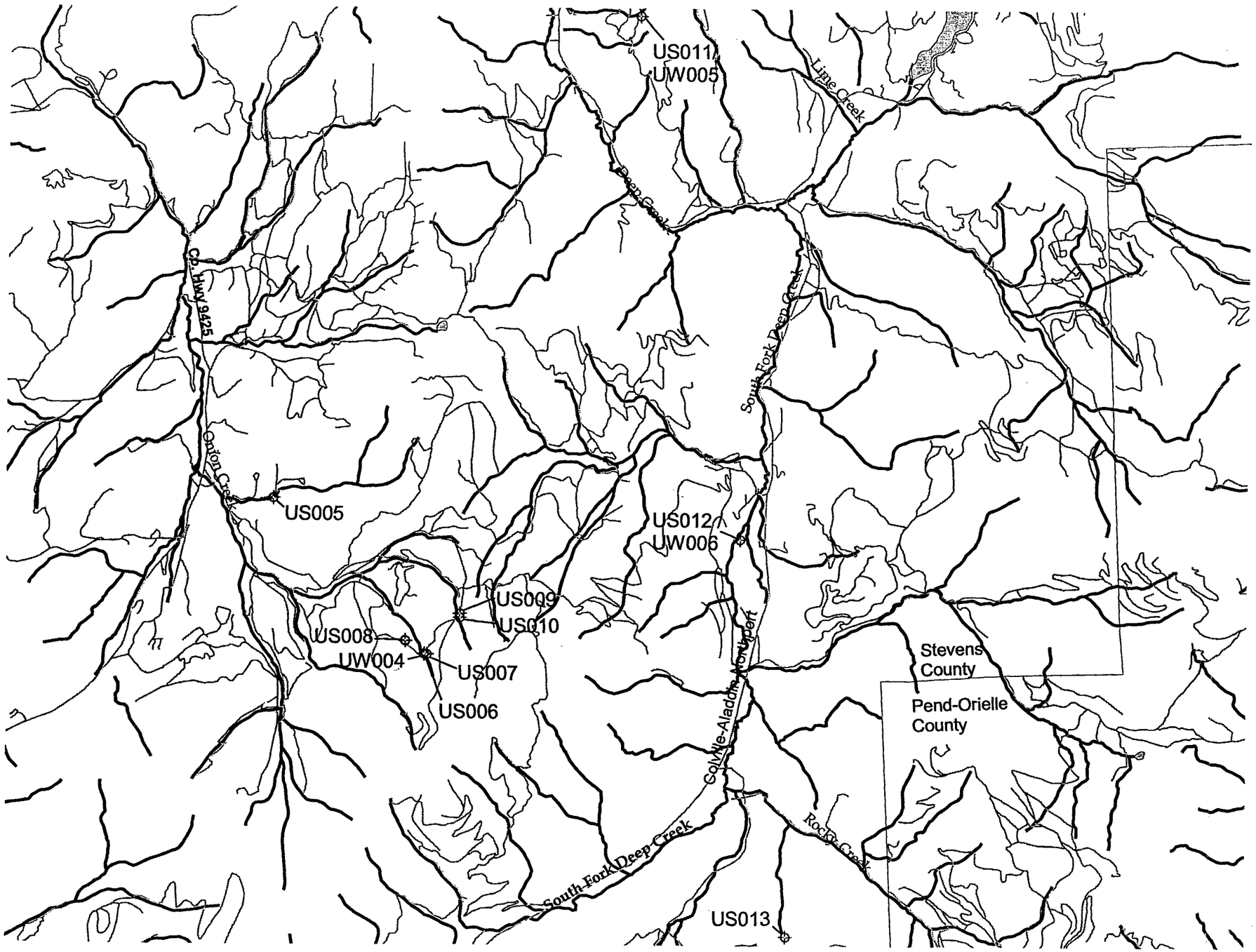
Scale in Feet



Columbia River/ Lake Roosevelt ESI Sample Station Location Map H

Figure
1H

WESTON
MANAGERS DESIGNERS/CONSULTANTS



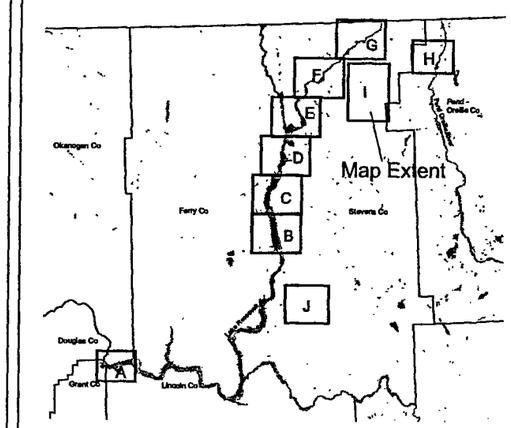
EXPLANATION

- Station Location
- Roads
- Streams
- County Line

N

0 3500 7000

Scale in Feet

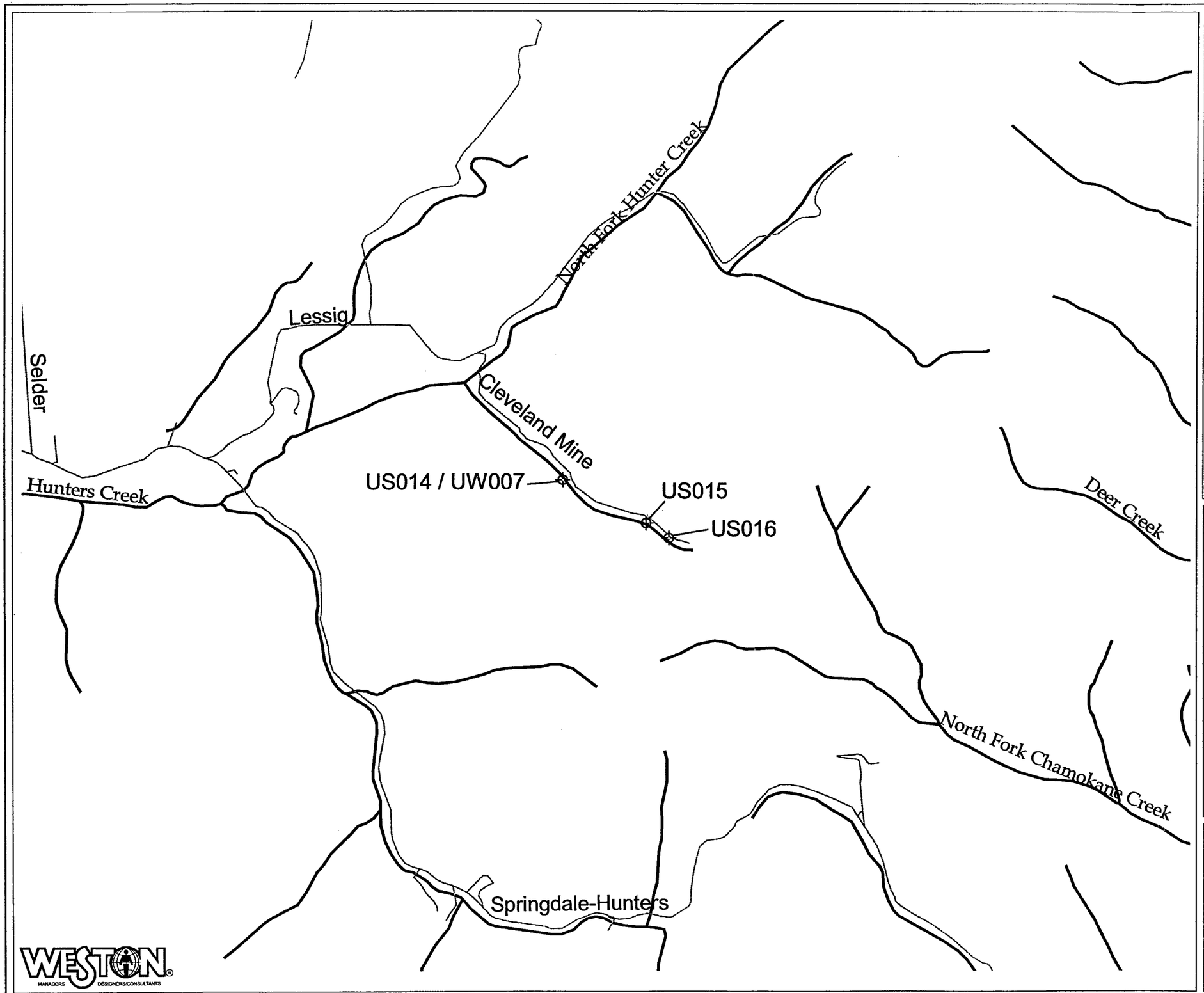


Columbia River/ Lake Roosevelt ESI Sample Station Locations Map I

Figure

11

WESTON
MANAGERS DESIGNERS/CONSULTANTS



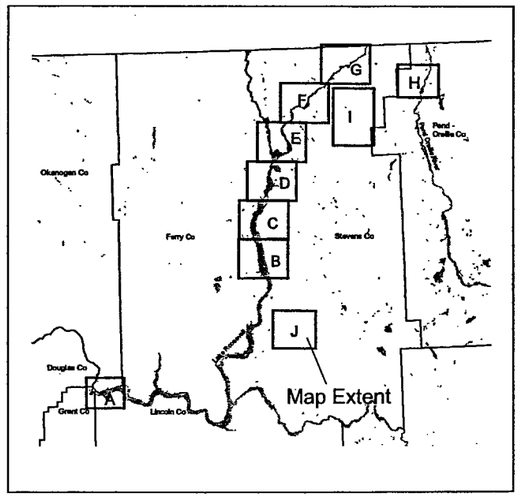
EXPLANATION

- Station Location
- Roads
- Streams
- County Line

N

0 1500 3000

Scale in Feet

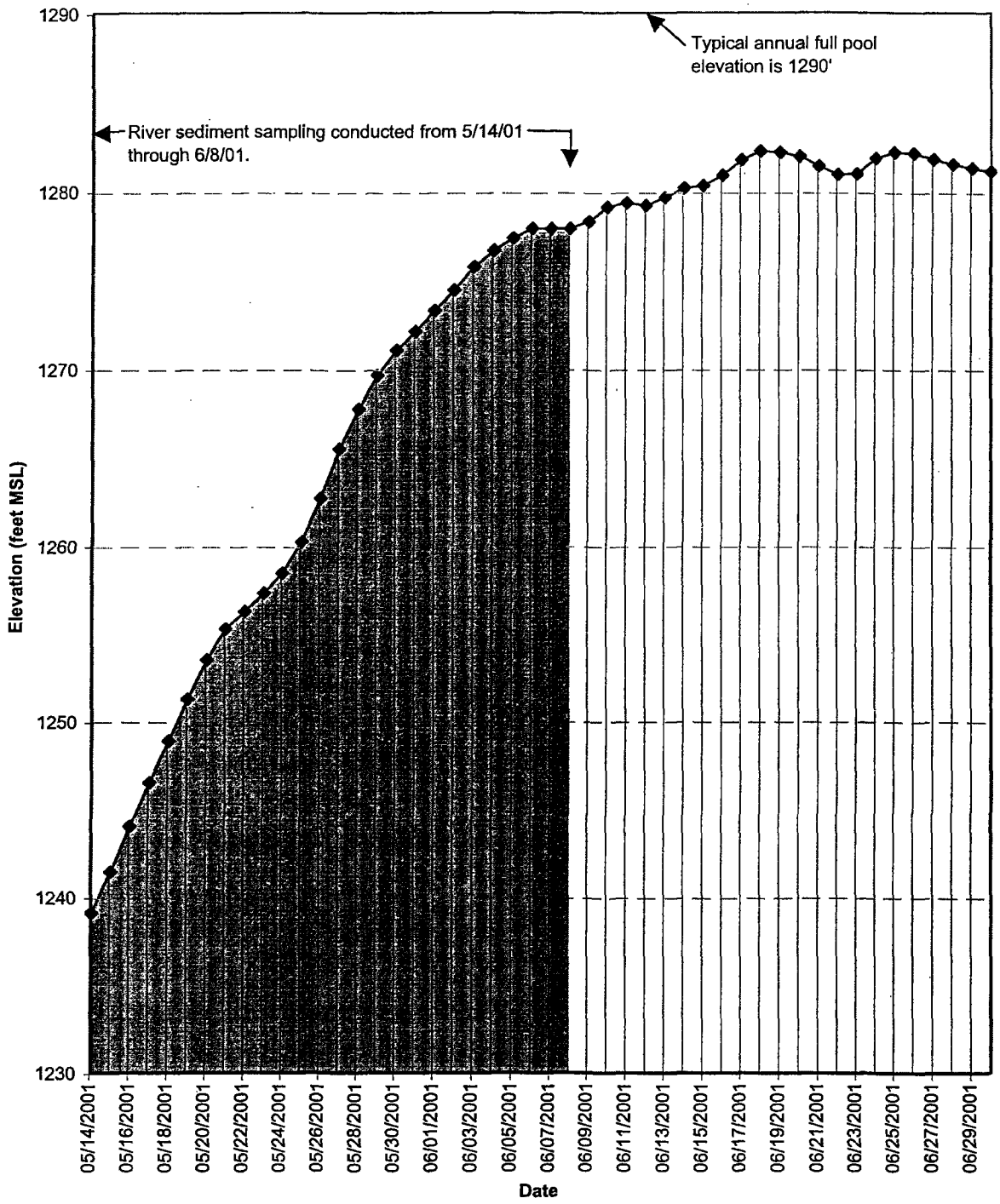


Columbia River/ Lake Roosevelt ESI Sample Station Locations Map J

Figure
1J

WESTON
MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig1J.ai



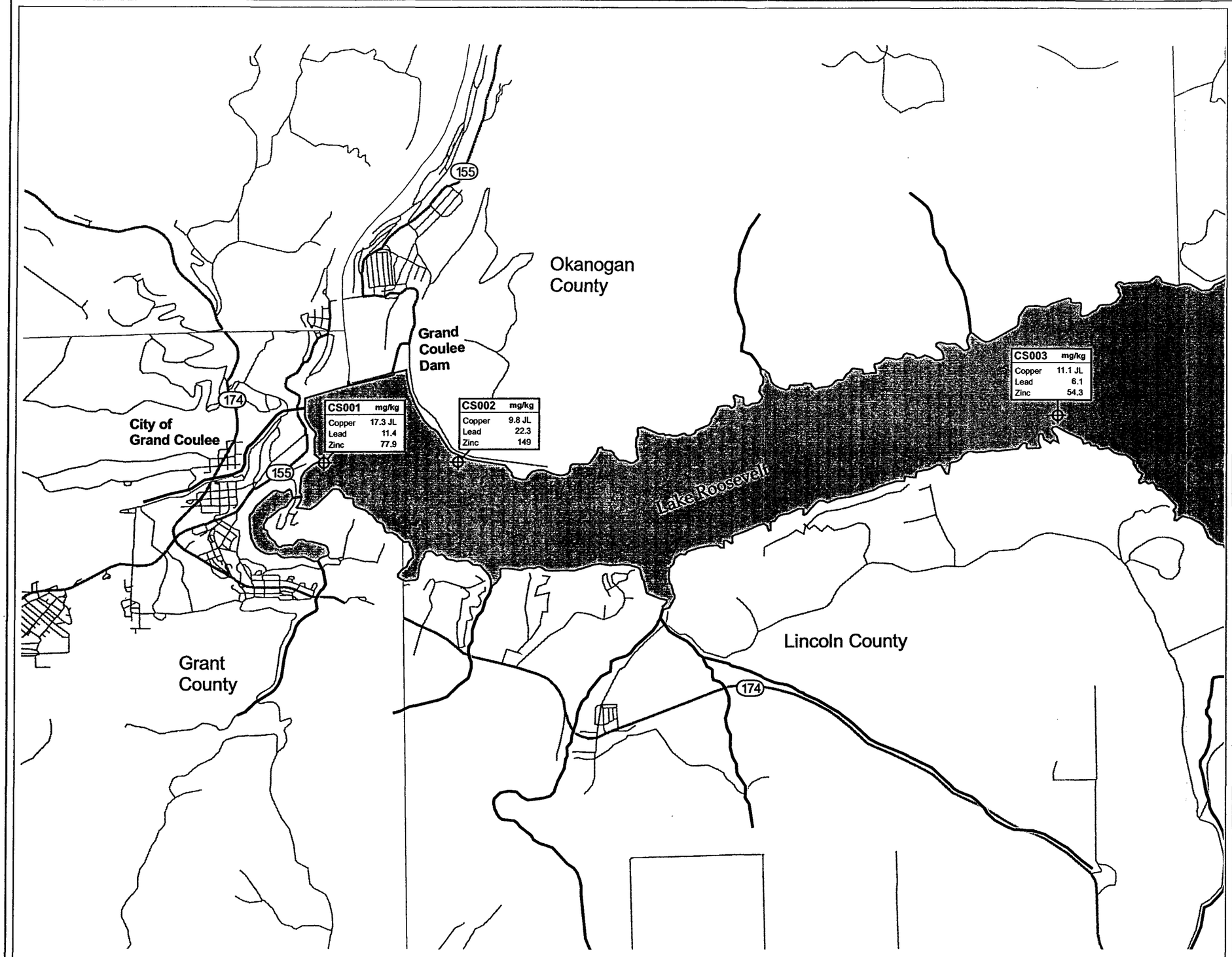
Source: Water level data based on measurements at Grand Coulee Dam, provided by the United States Bureau of Reclamation.

Columbia River/Lake Roosevelt ESI
Lake Roosevelt Water Level Elevation (ft MSL)
River Sediment Sampling Period 5/13/01 to 6/08/01

WESTON MANAGER DESIGNER /CONSULTANTS

Figure **2**

01-0381/TR Fig2.ai



EXPLANATION

- Station Location
- Roads
- Streams
- County Line

DATA QUALIFIERS

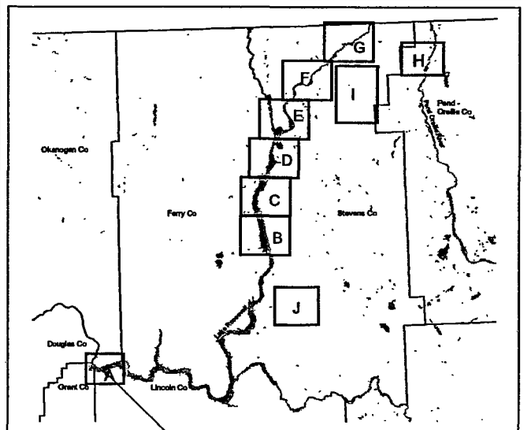
J The analyte was positively identified but the associated numerical value is an estimate.

L Low Bias

N

0 2000 4000

Scale in Feet



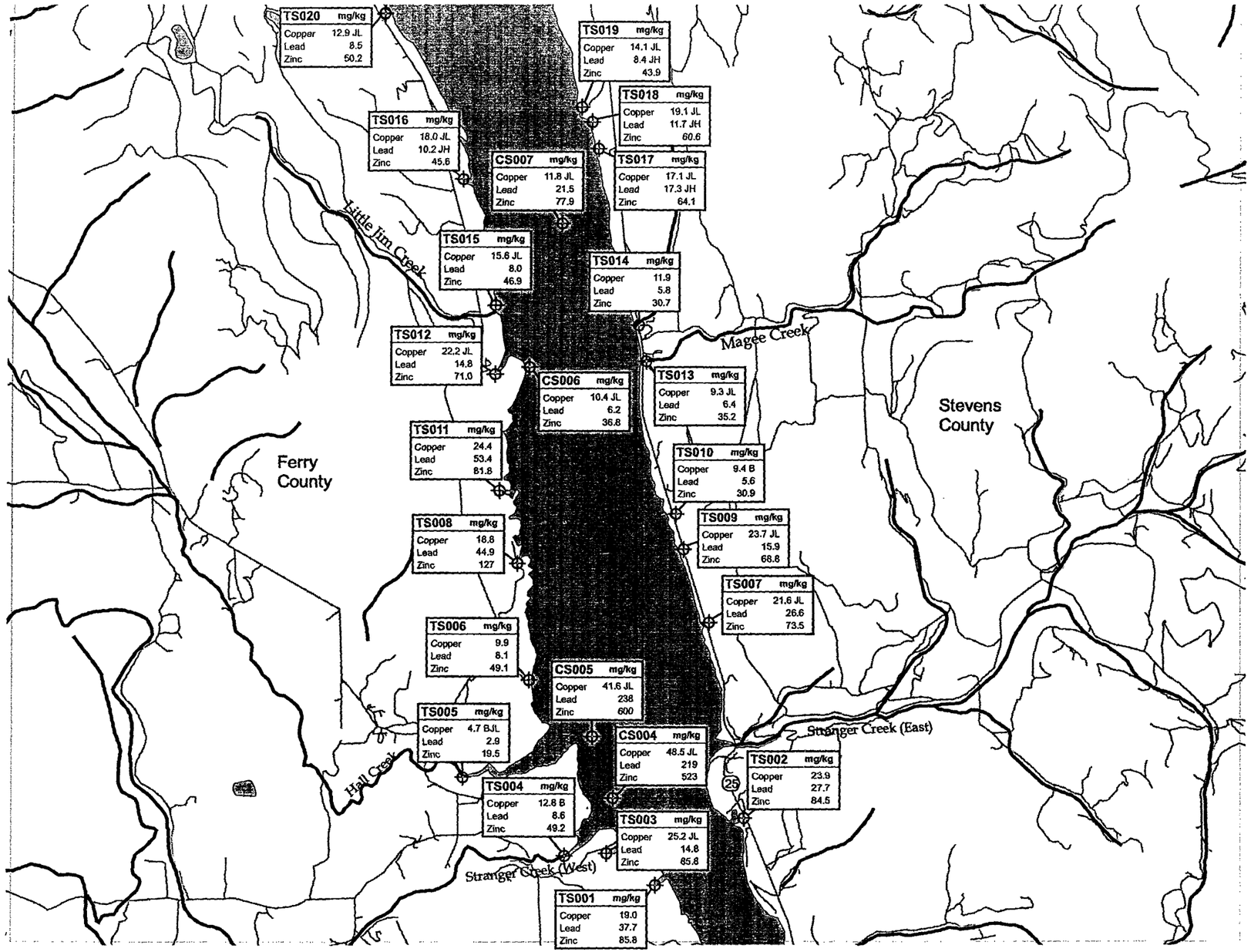
Columbia River/ Lake Roosevelt ESI Copper, Lead, and Zinc Sediment Concentrations Map A

Figure

3A

WESTON MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig3A.ai



EXPLANATION

- Station Location
- Roads
- Streams
- County Line

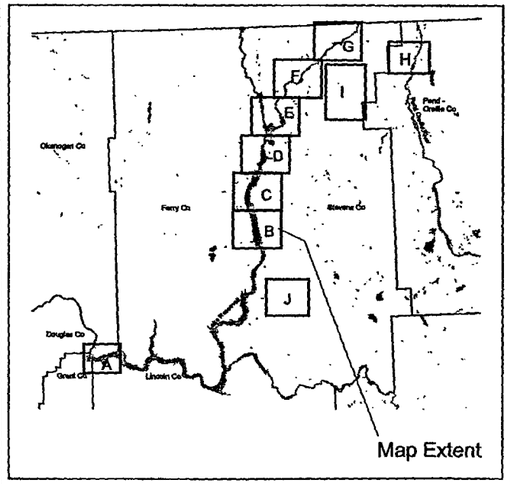
DATA QUALIFIERS

- **J** The analyte was positively identified but the associated numerical value is an estimate.
- **B** Detected concentration is below the method reporting limit/contract required detection limit but is above the instrument detection limit.
- **L** Low Bias
- **H** High Bias

N

0 2000 4000

Scale in Feet



Map Extent

Columbia River/ Lake Roosevelt ESI Copper, Lead, and Zinc Sediment Concentrations Map B

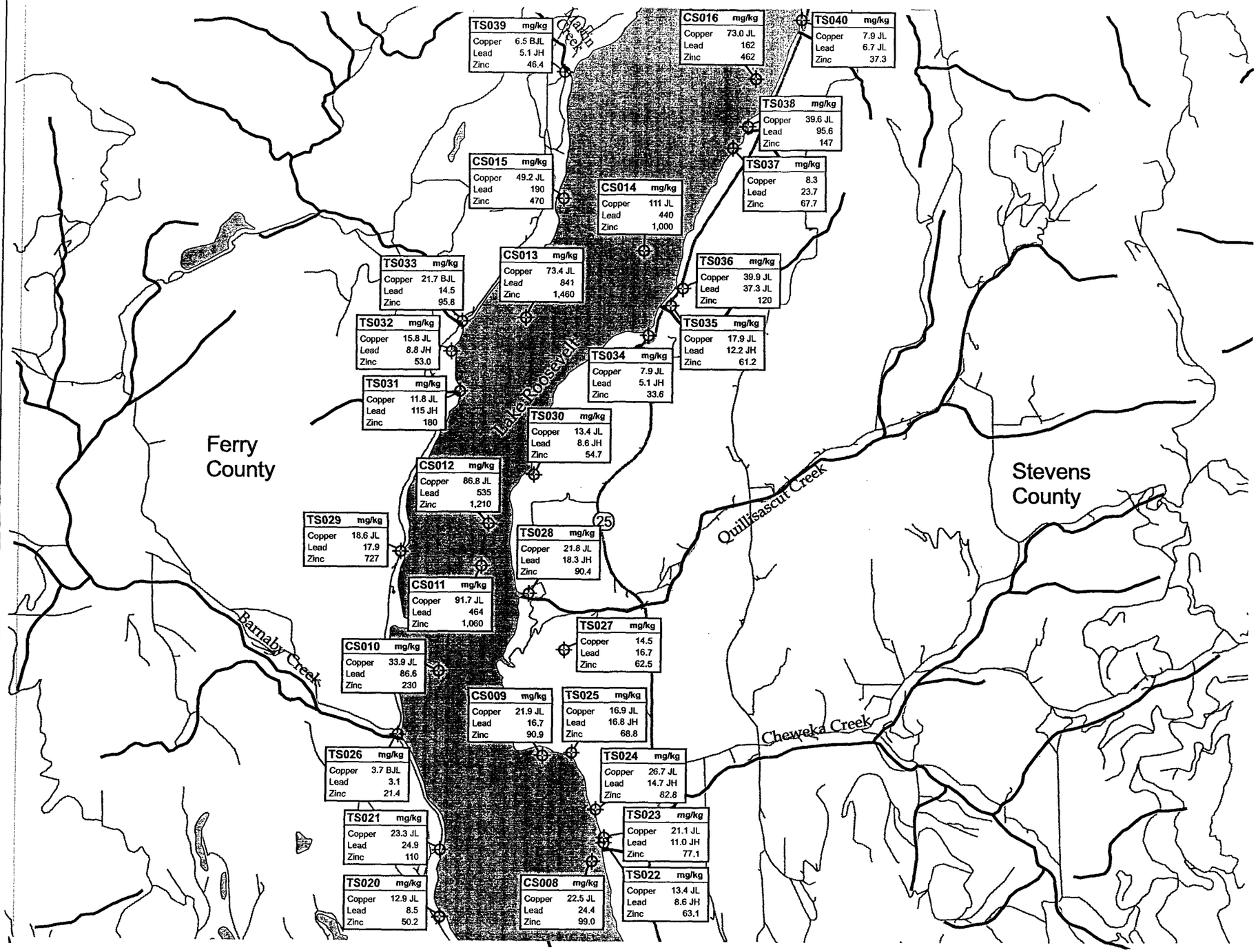
Figure

3B

WESTON

MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig3B.ai



EXPLANATION

- Station Location
- Roads
- Streams
- County Line

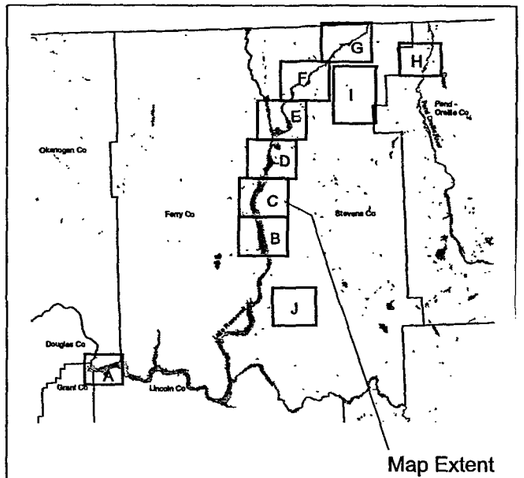
DATA QUALIFIERS

- **J** The analyte was positively identified but the associated numerical value is an estimate.
- **B** Detected concentration is below the method reporting limit/contract required detection limit but is above the instrument detection limit.
- **L** Low Bias
- **H** High Bias

N

0 2500 5000

Scale in Feet



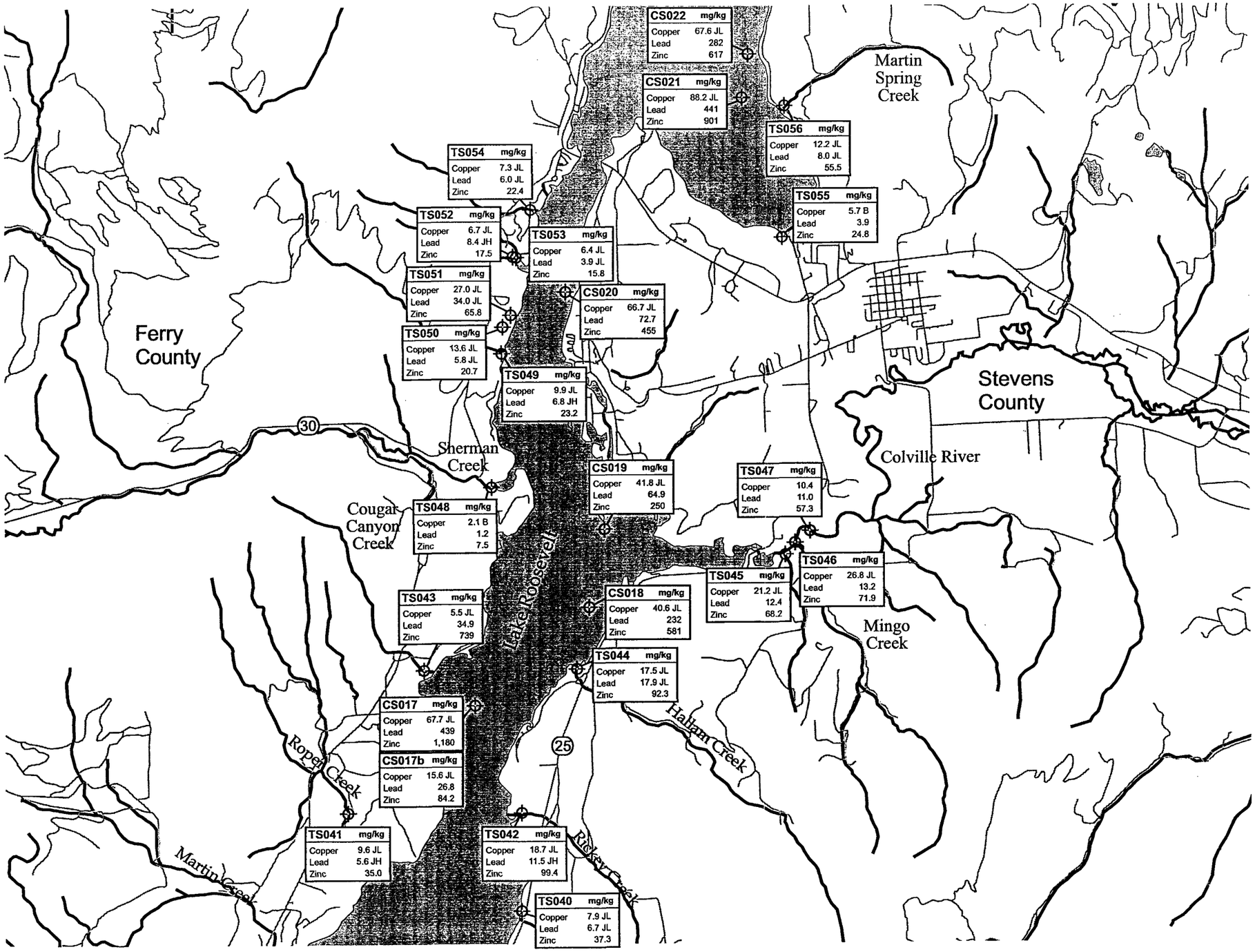
Map Extent

WESTON
MANAGERS DESIGNERS/CONSULTANTS

Columbia River/ Lake Roosevelt ESI Copper, Lead, and Zinc Sediment Concentrations Map C

Figure

3C



EXPLANATION

- Station Location
- Roads
- Streams
- County Line

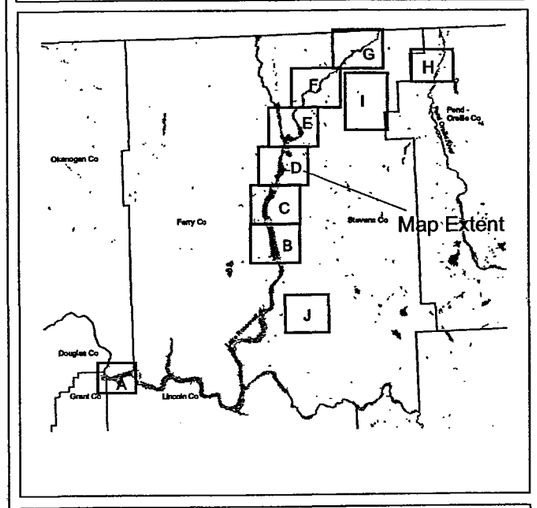
DATA QUALIFIERS

- **J** The analyte was positively identified but the associated numerical value is an estimate.
- **B** Detected concentration is below the method reporting limit/contract required detection limit but is above the instrument detection limit.
- **L** Low Bias
- **H** High Bias

N

0 2500 5000

Scale in Feet



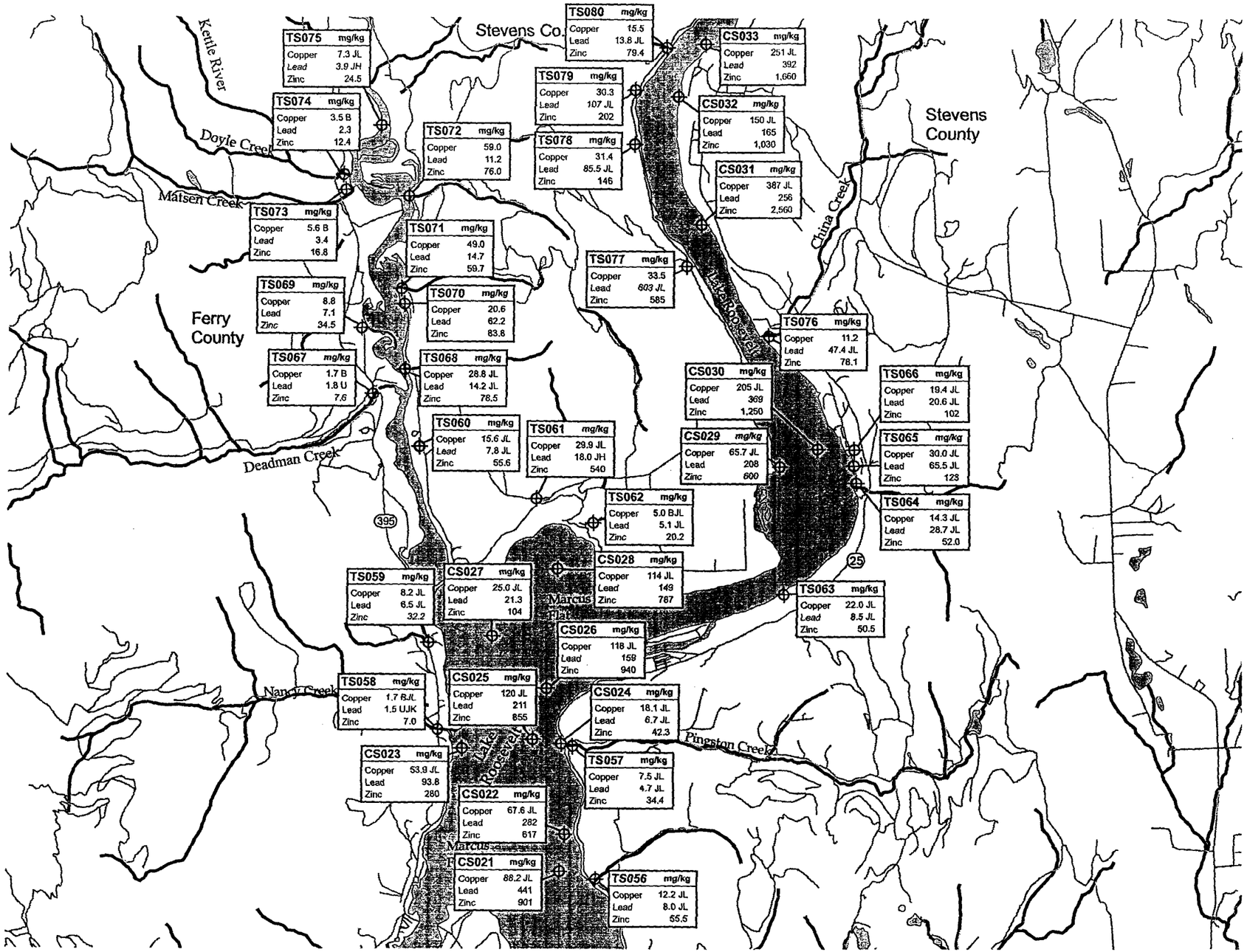
Columbia River/ Lake Roosevelt ESI Copper, Lead, and Zinc Sediment Concentrations Map D

Figure

3D

WESTON®

MANAGERS DESIGNERS/CONSULTANTS



EXPLANATION

- Station Location
- Roads
- Streams
- County Line

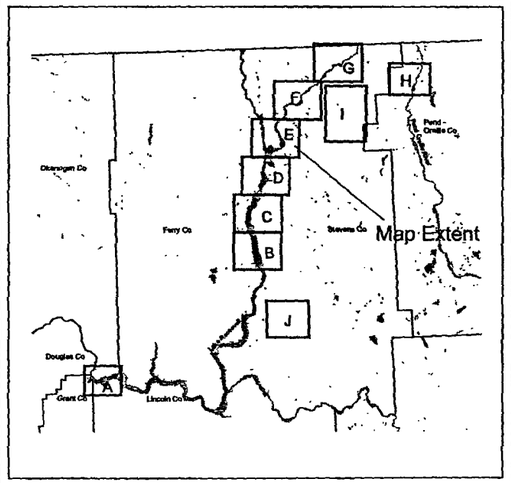
DATA QUALIFIERS

- **J** The analyte was positively identified but the associated numerical value is an estimate.
- **B** Detected concentration is below the method reporting limit/contract required detection limit but is above the instrument detection limit.
- **U** The compound was analyzed for, but not detected.
- **H** High Bias
- **K** Unknown Bias
- **L** Low Bias

N

0 3000 6000

Scale in Feet



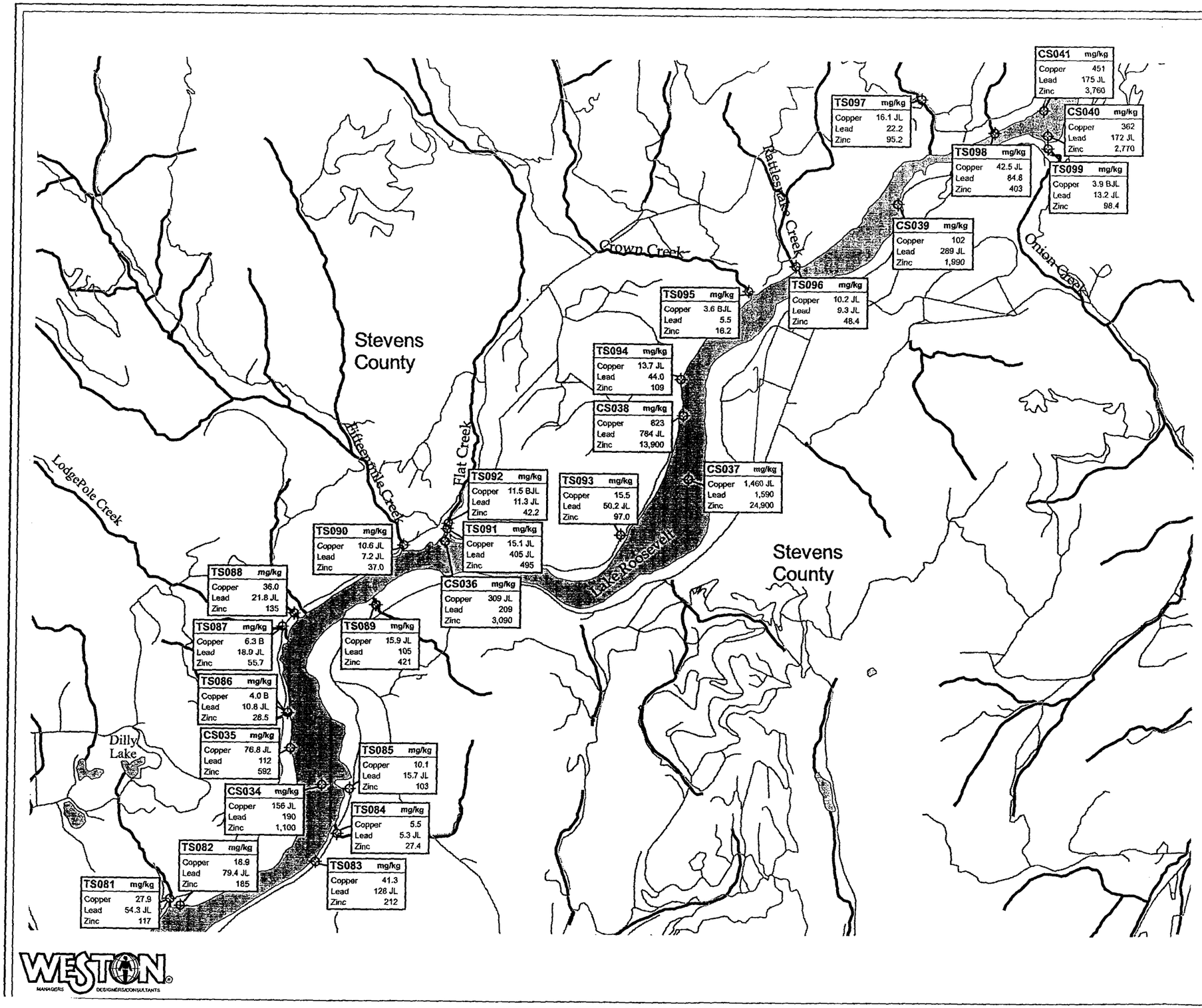
Columbia River/ Lake Roosevelt ESI Copper, Lead, and Zinc Sediment Concentrations Map E

Figure

3E

WESTON®
MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig3E.ai



EXPLANATION

- Station Location
- Roads
- Streams
- County Line

DATA QUALIFIERS

J The analyte was positively identified but the associated numerical value is an estimate.

B Detected concentration is below the method reporting limit/contract required detection limit but is above the instrument detection limit.

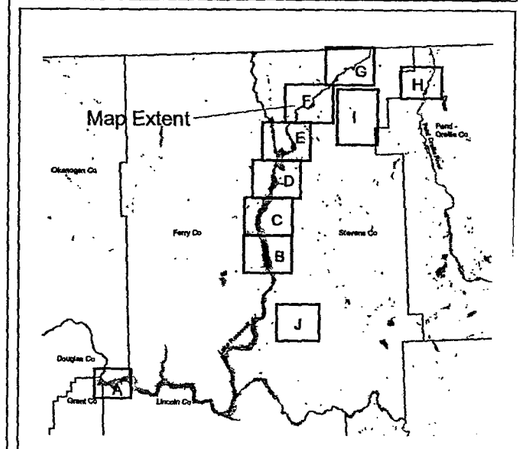
L Low Bias

* Location shown is based on uncorrected GPS data; corrected data unavailable.

N

0 2500 5000

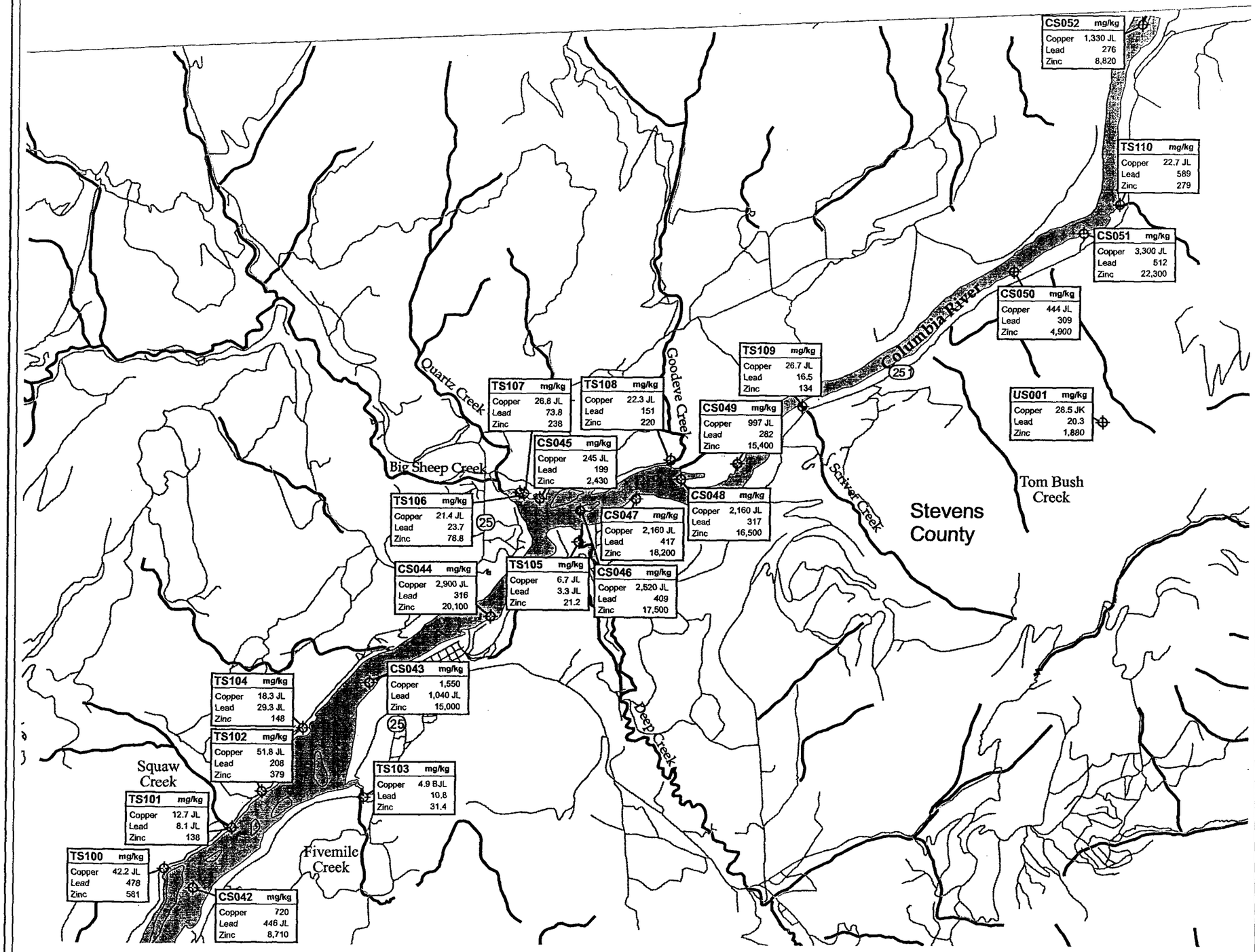
Scale in Feet



Columbia River/ Lake Roosevelt ESI Copper, Lead, and Zinc Sediment Concentrations Map F

Figure **3F**

WESTON MANAGERS DESIGNERS/CONSULTANTS



EXPLANATION

- Station Location
- Roads
- Streams
- County Line

DATA QUALIFIERS

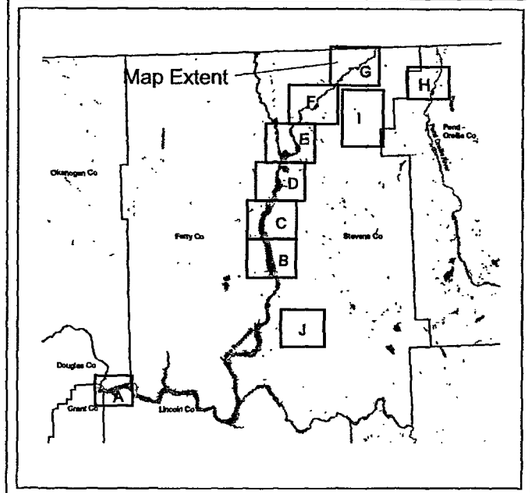
- **J** The analyte was positively identified but the associated numerical value is an estimate.
- **B** Detected concentration is below the method reporting limit/contract required detection limit but is above the instrument detection limit.
- **K** Unknown Bias
- **L** Low Bias

* Location shown is not based on GPS data; Differentially corrected GPS data for this sample is unavailable.

N

0 2500 5000

Scale in Feet



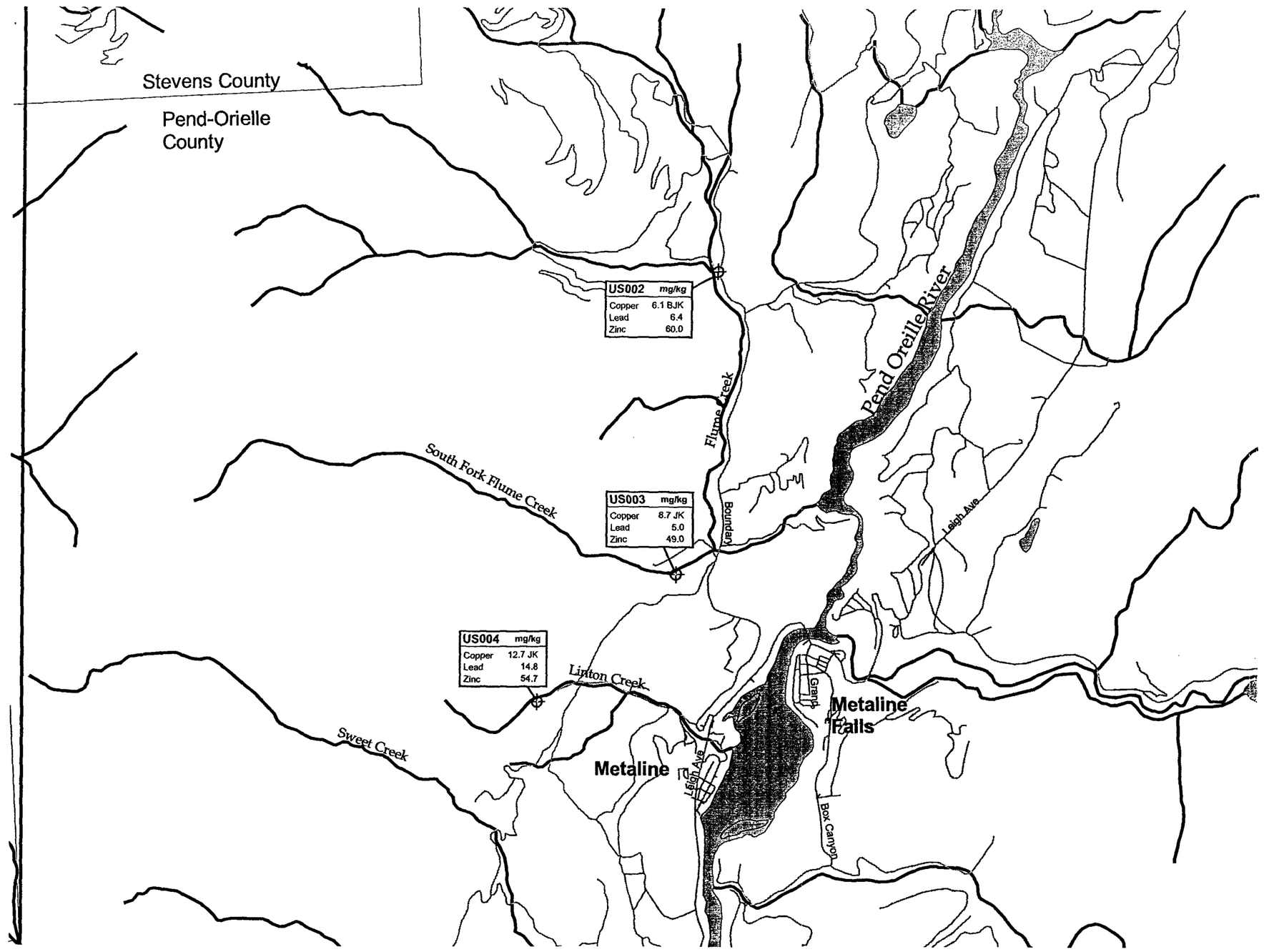
Columbia River/ Lake Roosevelt ESI Copper, Lead, and Zinc Sediment Concentrations Map G

Figure

3G

WESTON MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig3G.ai



EXPLANATION

- Station Location
- Roads
- Streams
- County Line

DATA QUALIFIERS

J The analyte was positively identified but the associated numerical value is an estimate.

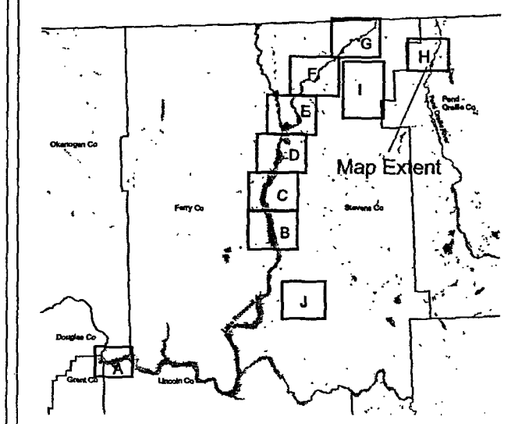
B Detected concentration is below the method reporting limit/contract required detection limit but is above the instrument detection limit.

K Unknown Bias

N

0 2000 4000

Scale in Feet



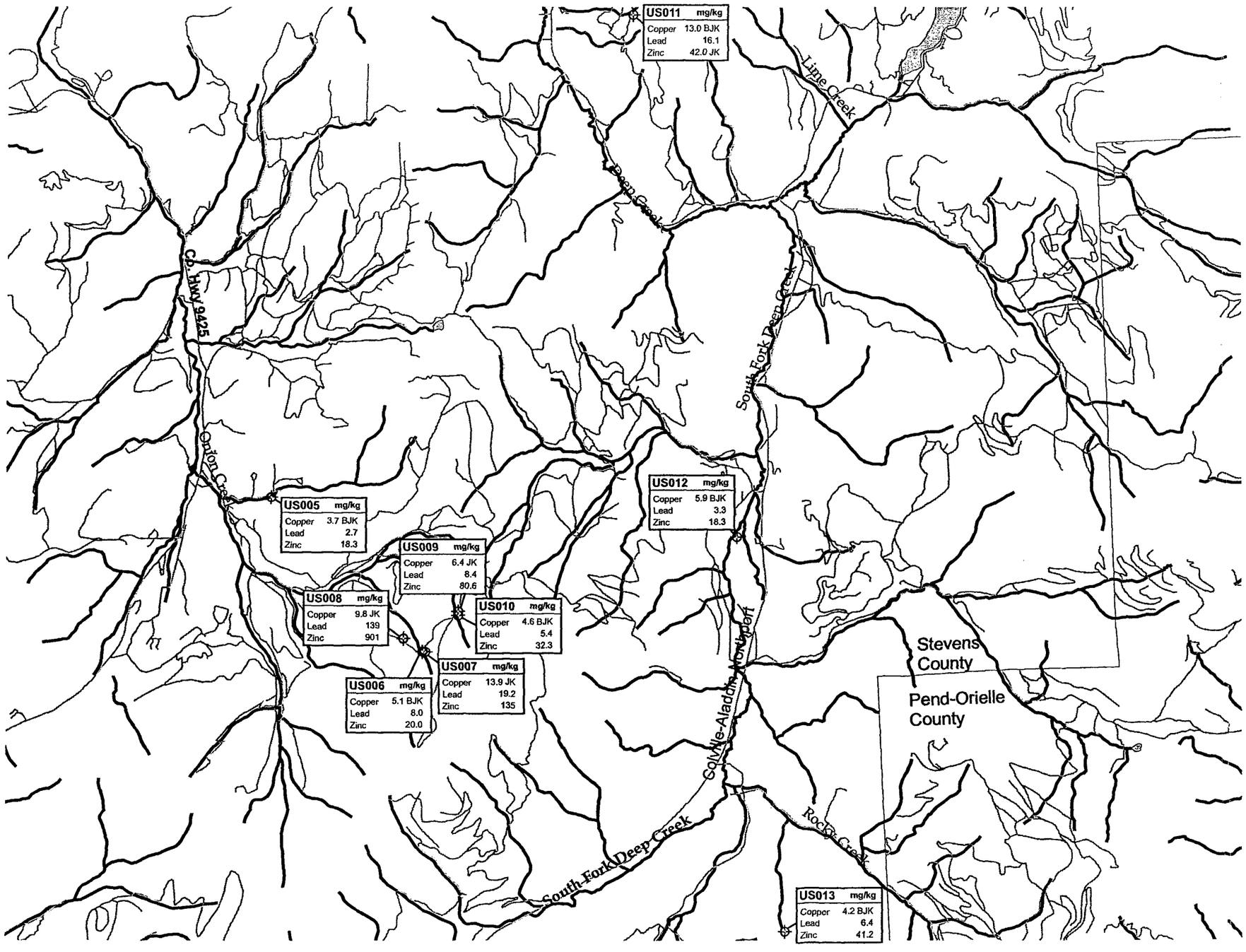
Columbia River/ Lake Roosevelt ESI Copper, Lead, and Zinc Sediment Concentrations Map H

Figure

3H

WESTON MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig3H.ai



EXPLANATION

- Station Location
- Roads
- Streams
- County Line

DATA QUALIFIERS

J The analyte was positively identified but the associated numerical value is an estimate.

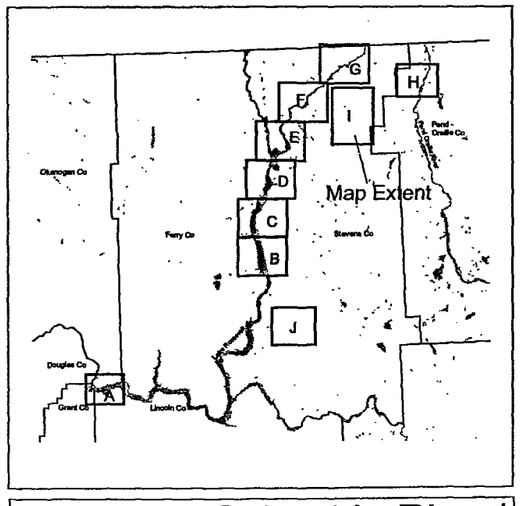
B Detected concentration is below the method reporting limit/contract required detection limit but is above the instrument detection limit.

K Unknown Bias

N

0 3500 7000

Scale in Feet



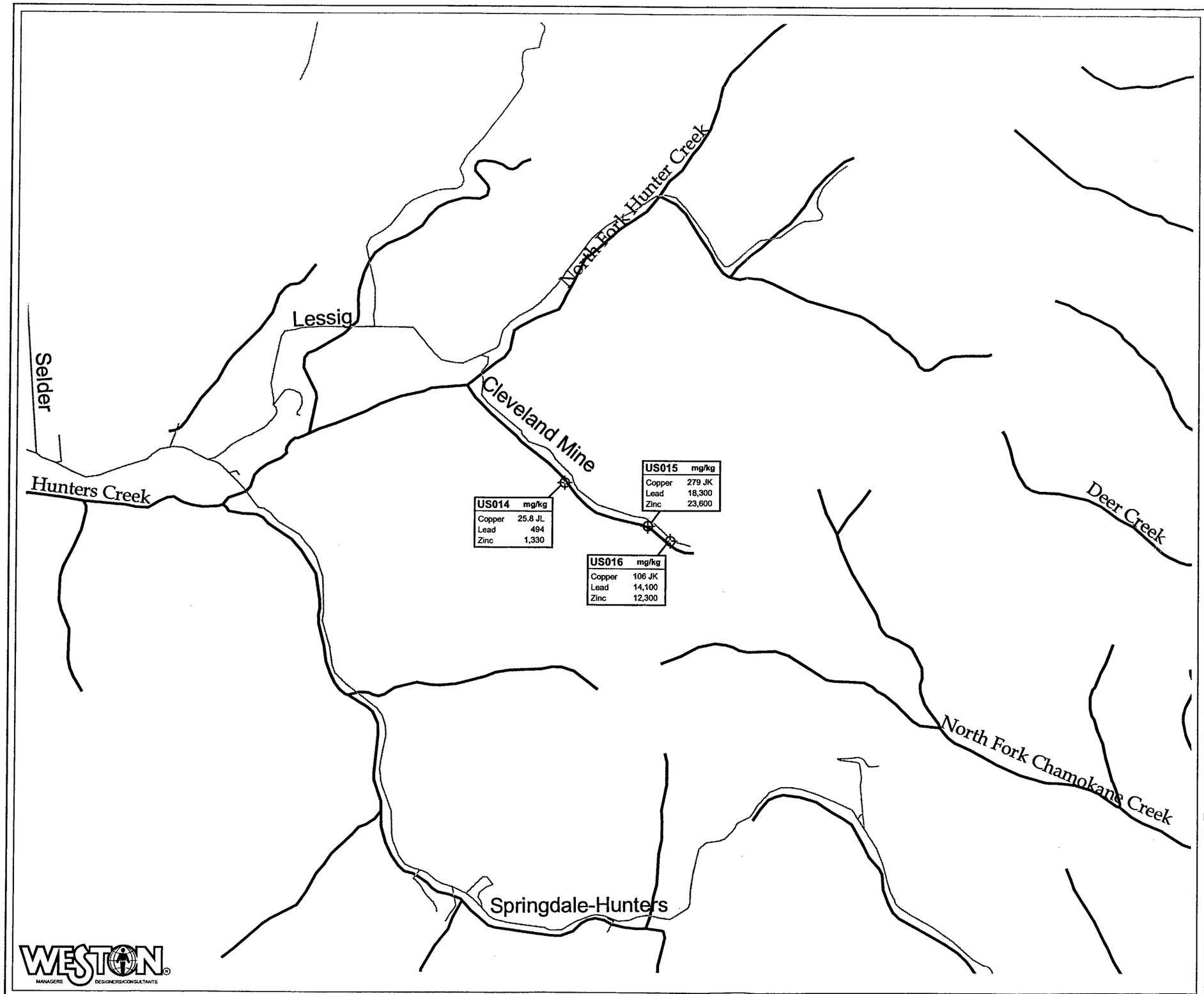
Columbia River/ Lake Roosevelt ESI Copper, Lead, and Zinc Sediment Concentrations Map I

Figure

3I

WESTON®
MANAGERS DESIGNERS/CONSULTANTS

01-0381/TR Fig3I.ai



EXPLANATION

- Station Location
- Roads
- Streams
- County Line

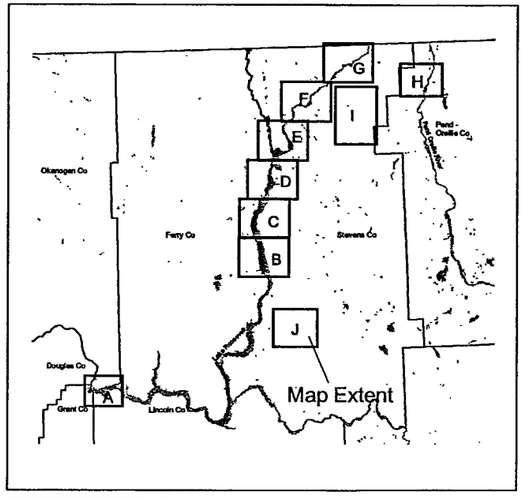
DATA QUALIFIERS

- **J** The analyte was positively identified but the associated numerical value is an estimate.
- **K** Unknown Bias
- **L** Low Bias

N

0 1500 3000

Scale in Feet



Columbia River/ Lake Roosevelt ESI Copper, Lead, and Zinc Sediment Concentrations Map J

Figure **3J**

01-0381/TR Fig3J.ai

APPENDIX A

SAMPLE STATION GPS LOCATIONS

Station ID	Station Description	Data File	GPS Date	GPS Time	Longitude	Latitude	Distance/ Direction to Sample Location
CW001	Grand Coulee Drinking Water System distribution	q051422a	14-May-01	15:12:32	-118.9961089	47.93332505	
CW002	Lake Roosevelt Grand Coulee Drinking Water Intake	q051519a	15-May-01	12:12:24	-118.9679922	47.9419154	
CS001	Lake Roosevelt Crescent Bay boat ramp	q051501a	14-May-01	18:19:34	-118.9862354	47.94759778	
CS002	Lake Roosevelt North Dam Boat Ramp	q051502a	14-May-01	19:05:58	-118.9642342	47.94736508	
CS003	Lake Roosevelt Plum Point	q051520b	15-May-01	13:23:03	-118.8661507	47.95086836	
CS004	Lake Roosevelt near Inchelium	M051717a	17-May-01	10:12:53	-118.1725243	48.30055232	
CS005	Lake Roosevelt at point south of Hall Creek	M051717b	17-May-01	11:08:06	-118.1763554	48.30913076	
CS006	Lake Roosevelt at Mission Point	M051718b	17-May-01	11:29:56	-118.1867656	48.36033147	
CS007	Lake Roosevelt north of Daisy Station	M051719a	17-May-01	12:17:01	-118.1790535	48.37980781	
CS008	Lake Roosevelt south of Cheweka Creek	M051720a	17-May-01	13:56:37	-118.1834736	48.41597662	
CS009	Lake Roosevelt south of Chalk Grade Point	M051723a	17-May-01	16:07:17	-118.1930954	48.43027213	
CS010	Lake Roosevelt south of Barnaby Island	M051722a	17-May-01	15:46:08	-118.2135052	48.44196518	
CS011	Lake Roosevelt on flats north of Quillisascut Creek	M051723b	17-May-01	16:35:23	-118.2044906	48.45583243	
CS012	Lake Roosevelt on flats north of Quillisascut Creek	M051817a	18-May-01	10:11:39	-118.2027768	48.46142995	
CS013	Lake Roosevelt on flats between French Point Rocks and La Fleur Creek	M051818a	18-May-01	11:07:27	-118.1943002	48.48882027	
CS014	Lake Roosevelt on mid-channel bar east of French Point Rocks	M051819a	18-May-01	12:20:57	-118.1700454	48.49718576	
CS015	Lake Roosevelt north of French Point	M051820a	18-May-01	13:20:07	-118.1860212	48.50445393	
CS016	Lake Roosevelt on flats North of Bradbury Beach	t051821a	18-May-01	14:25:17	-118.1465529	48.51941734	
CS017	Lake Roosevelt on flats fronting Haag Cove	t051822a	18-May-01	15:31:34	-118.1444874	48.55427273	

Station ID	Station Description	Data File	GPS Date	GPS Time	Longitude	Latitude	Distance/ Direction to Sample Location
CS018	Lake Roosevelt on flats south of Colville River	t051916a	19-May-01	09:05:38	-118.1209358	48.56666331	
CS019	Lake Roosevelt in bay at Colville River mouth	t051917a	19-May-01	10:23:50	-118.1173265	48.57692281	
CS020	Lake Roosevelt south of Boise Cascade Log Boom	t051918a	19-May-01	11:17:13	-118.1232783	48.60848159	
CS021	Lake Roosevelt, Marcus Flats, northwest of Martin Spring Creek	m052117a	21-May-01	10:18:33	-118.0865754	48.63306761	
CS022	Lake Roosevelt, Marcus Flats, southwest of Pingston Creek	m052117b	21-May-01	10:54:01	-118.0851346	48.6386791	
CS023	Lake Roosevelt, Marcus Flats (west bank)	m052118a	21-May-01	11:55:11	-118.108375	48.65239937	
CS024	Marcus Flats, north of Pingston Creek	Q060816a	08-Jun-01	09:38:56	-118.0851656	48.65257778	
CS025	Lake Roosevelt on Marcus Flats west of Pingston Creek	m052119a	21-May-01	12:28:33	-118.0918876	48.65340326	
CS026	Lake Roosevelt, Marcus Flats, south of Marcus Island	m052120d	21-May-01	13:51:47	-118.0882371	48.66118525	
CS027	Lake Roosevelt, Marcus Flats, east of Kamloops	m052120c	21-May-01	13:24:12	-118.100571	48.66951163	
CS028	Lake Roosevelt, Marcus Flats northeast	m052121b	21-May-01	14:32:36	-118.0849062	48.67947102	
CS029	Lake Roosevelt north of Summer Island	m052122a	21-May-01	15:51:59	-118.0324467	48.69400597	
CS030	Lake Roosevelt on flats at Evans Campground	m052123a	21-May-01	16:36:06	-118.0233336	48.69649822	
CS031	Lake Roosevelt east of Snag Cove	m052200b	21-May-01	17:43:31	-118.0491558	48.73141971	
CS032	Lake Roosevelt on flats south of Bossburg	m052217a	22-May-01	10:02:08	-118.0536867	48.75086841	
CS033	Lake Roosevelt on flats north of Bossburg	m052217b	22-May-01	10:54:37	-118.0468477	48.758648	
CS034	Lake Roosevelt on flats south of North Gorge (east bank)	m052220a	22-May-01	13:57:37	-118.0070171	48.78642347	
CS035	Lake Roosevelt on flats south of North Gorge (west bank)	m052218a	22-May-01	11:51:02	-118.0135149	48.79179918	

Station ID	Station Description	Data File	GPS Date	GPS Time	Longitude	Latitude	Distance/ Direction to Sample Location
CS036	Lake Roosevelt east of Flat Creek (north bank)	m052222a1	22-May-01	15:10:53	-117.978723	48.82050073	
CS037	Lake Roosevelt at China Bar	m052223a	22-May-01	16:36:40	-117.9259154	48.82824855	
CS038	Lake Roosevelt near navigation light south of Crown Creek	m052317a	23-May-01	10:46:47	-117.9266419	48.83728583	
CS039	Lake Roosevelt north of Rattlesnake Creek (east bank)	m052318a	23-May-01	11:36:52	-117.8787563	48.8661392	
CS040	Lake Roosevelt north of Onion Creek	m052319a	23-May-01	12:41:11	-117.8462534	48.87497229	
CS041	Upper Columbia River southern tip of island northwest of Onion Creek	m052320a	23-May-01	13:26:19	-117.8468787	48.87851059	
CS042	Upper Columbia River southern tip of island south of Squaw Creek	m052321a	23-May-01	14:20:34	-117.835167	48.88751909	
CS043	Upper Columbia River north of Fivemile Creek	m052322a	23-May-01	15:19:42	-117.797504	48.9143281	
CS044	Upper Columbia River on beach at Northport	M053117a	31-May-01	10:36:08	-117.7721632	48.92262736	
CS045	Upper Columbia River north of Big Sheep Creek	M053119a	31-May-01	12:19:22	-117.7613159	48.93831373	
CS046	Upper Columbia River south of Steamboat Rock	m053121a	31-May-01	NA	-117.7532583	48.93650278	10 feet SE
CS047	Upper Columbia River northeast of Steamboat Rock	M053122a	31-May-01	15:17:03	-117.7415272	48.93783955	
CS048	Upper Columbia River north of Goodeve Creek	M053123a	31-May-01	16:15:58	-117.7323342	48.94028916	
CS049	Upper Columbia River on point bar southwest of Scriver Creek	M060117a	01-Jun-01	10:08:40	-117.7207054	48.94212391	
CS050	Upper Columbia River south of Tom Bush Creek	M060118A	01-Jun-01	NA	-117.6618917	48.96629444	
CS051	Upper Columbia River at "Black Sand Beach"	M060119A	01-Jun-01	NA	-117.647925	48.97103611	
CS052	Upper Columbia River on boulder bar near border	M060121A	01-Jun-01	NA	-117.6354222	48.99799167	
TS001	Unnamed, T32N R37E, Section 8	m060517a	05-Jun-01	10:16:03	-118.1643877	48.28845408	

Station ID	Station Description	Data File	GPS Date	GPS Time	Longitude	Latitude	Distance/ Direction to Sample Location
TS002	Unnamed, Clover Leaf Beach Campground	m060517b	05-Jun-01	10:57:19	-118.1456511	48.29717002	
TS003	Unnamed, T32N R37E, Section 8 (northern tributary)	t060322a	03-Jun-01	15:22:06	-118.1729757	48.29296774	300 feet W
TS004	Stranger Creek (west)	m060518a	05-Jun-01	11:49:08	-118.1829764	48.29285846	
TS005	Hall Creek	t060320a	03-Jun-01	13:39:51	-118.2032307	48.30413505	
TS006	Cobbs Creek	m060520a	05-Jun-01	13:15:41	-118.1885971	48.31719259	100 feet W
TS007	Unnamed, T33N, R37E, Section 28	t060421c	04-Jun-01	14:48:15	-118.151378	48.32425419	
TS008	Unnamed, T33N, R37E, Section 30	m060521a	05-Jun-01	14:01:41	-118.1906981	48.33331945	
TS009	unproposed sampling location	t060500a	04-Jun-01	17:07:37	-118.1559862	48.33447263	20 E
TS010	Unnamed, T33N, R37E, Section 21	t060422a	04-Jun-01	15:41:57	-118.157417	48.33935713	
TS011	Unnamed, T33N, R37E, Section 19	m060522b	05-Jun-01	15:05:27	-118.19292	48.34340185	210 feet upstream
TS012	Unnamed, T33N, R37E, Section 18	t060317b	03-Jun-01	10:52:39	-118.193852	48.35956205	20 feet SW
TS013	Magee Creek	t060419a	04-Jun-01	12:46:57	-118.1625806	48.36059685	
TS014	Jennings Creek	t060421a	04-Jun-01	14:10:01	-118.163853	48.36554478	
TS015	Little Jim Creek	t060317a	03-Jun-01	10:09:21	-118.1931897	48.3681474	300 feet upstream
TS016	Unnamed, T33N R36E, Section 1	m060522c	05-Jun-01	15:46:41	-118.1992424	48.38629585	
TS017	Unnamed, T33N R37E, Section 4	m060523a	05-Jun-01	16:32:58	-118.1711696	48.38987494	20 feet E
TS018	Unnamed, T33N R37E, Section 5	m060616b	06-Jun-01	09:51:13	-118.1722093	48.39352615	
TS019	Unnamed, T34N R37E, Section 32	m060617a	06-Jun-01	10:12:53	-118.174282	48.39556317	
TS020	Unnamed, T34N R36E, Section 36	m060317a	03-Jun-01	10:26:27	-118.2145678	48.40914227	
TS021	Unnamed, T34N R36E, Section 25	m060319a	03-Jun-01	12:17:17	-118.213972	48.41797662	34 feetW, 30 feetN
TS022	Cheweka Creek	m060618a	06-Jun-01	11:38:20	-118.1804793	48.41838184	130 feet upstream
TS023	Unnamed, T34N, R37E, Section 29 (north of Cheweka Creek)	m060619a	06-Jun-01	12:19:30	-118.1810255	48.4191279	6 feet E
TS024	Unnamed, T34N, R37E, Section 29 (NW qtr)	m060619b	06-Jun-01	12:57:55	-118.1825808	48.42289413	
TS025	Unnamed, T34N, R37E, Section 20	m060620a	06-Jun-01	13:30:14	-118.1871371	48.43054423	
TS026	Barnaby Creek	m060320a	03-Jun-01	13:05:40	-118.2221733	48.4336522	
TS027	Rotter Bay Creek	t060418a	04-Jun-01	11:50:25	-118.1881865	48.44430514	
TS028	Quillisascut Creek	m060621a	06-Jun-01	14:49:28	-118.1950141	48.4519532	
TS029	Unnamed, T34N, R36E, Section 11	m060321a	03-Jun-01	14:17:36	-118.2206472	48.45808083	30 feet W
TS030	Unnamed, T34N, R37E, Section 6	m060622a	06-Jun-01	15:13:26	-118.1933508	48.4678232	
TS031	Cuba Canyon Creek	m060622b	06-Jun-01	15:50:23	-118.2079577	48.47924134	

Station ID	Station Description	Data File	GPS Date	GPS Time	Longitude	Latitude	Distance/ Direction to Sample Location
TS032	Unnamed, T35N, R37E, Section 31	m060716a	07-Jun-01	09:17:54	-118.2095575	48.48460456	
TS033	La Fleur Creek	m060322a	03-Jun-01	15:03:37	-118.2072271	48.48854853	5 feet E
TS034	Unnamed, T36N, R37E, Section 32	m060717a	07-Jun-01	10:10:49	-118.1696321	48.48597205	30 feet E
TS035	Unnamed, T36N, R37E, Section 33 (southwest qtr); drains Nettleton Lake	m060922a	09-Jun-01	15:04:17	-118.1648929	48.48984614	
TS036	Unnamed, T35N, R37E, Section 33 (northwest qtr)	m060922b	09-Jun-01	15:57:20	-118.162371	48.49207338	
TS037	Unproposed sampling location	t060416a	04-Jun-01	09:54:36	-118.1517962	48.51021109	100 feet upstream
TS038	Unnamed, T35N, R37E, Section 22 (south of Bradbury campground)	t060417a	04-Jun-01	10:30:01	-118.148486	48.51319364	
TS039	Martin Creek	m060718a	07-Jun-01	11:11:09	-118.1843743	48.52104276	200 feet W
TS040	Unnamed, T35N, R37E, Section 15 (north of Bradbury campground)	m060719a	07-Jun-01	12:38:56	-118.1367045	48.52695478	10 feet S
TS041	Roper Creek	m060718b	07-Jun-01	11:41:47	-118.1706976	48.54066585	
TS042	Rickey Creek	m060720a	07-Jun-01	13:06:51	-118.135959	48.53985776	
TS043	Cougar Canyon Creek	m060417a	04-Jun-01	10:18:45	-118.1545381	48.5591544	
TS044	Hallam Creek	t060622a	06-Jun-01	15:11:35	-118.1237631	48.55857879	
TS045	Unnamed ephemeral tributary west of Mingo Creek	m060501b	04-Jun-01	18:42:01	-118.0814043	48.57265454	
TS046	Mingo Creek	m060501a	04-Jun-01	18:00:23	-118.0794128	48.57414722	
TS047	Colville River	m060500a	04-Jun-01	17:28:04	-118.0763658	48.57566028	
TS048	Sherman Creek	m060418a	04-Jun-01	11:40:00	-118.1394913	48.58308291	
TS049	Unnamed, T36N, R37E, Section 22, SE qtr	m060800a	07-Jun-01	17:16:01	-118.1362962	48.60069248	65 feet W
TS050	Unmapped tributary adjacent to TS051	m061000a	09-Jun-01	17:33:00	-118.1360749	48.60422634	
TS051	Unnamed, T36N, R37E, Section 22, NE qtr	m060722b	07-Jun-01	15:57:36	-118.1344893	48.60572171	
TS052	Unnamed, T36N, R37E, Section 15, SE qtr, western tributary	m060722a	07-Jun-01	15:09:15	-118.1336598	48.61336795	
TS053	Unnamed, T36N, R37E, Section 15, SE qtr, eastern tributary	m060721c	07-Jun-01	14:49:38	-118.1328802	48.61328849	
TS054	Unnamed, T36N, R37E, Section 14, SW qtr	m060721b	07-Jun-01	14:25:01	-118.1289512	48.61919872	200 feet upstream

Station ID	Station Description	Data File	GPS Date	GPS Time	Longitude	Latitude	Distance/ Direction to Sample Location
TS055	Unnamed, ephemeral tributary, T36N, R38E, Section 18, SW qtr	m060421a	04-Jun-01	14:17:30	-118.0795677	48.6153404	200 feet upstream
TS056	Martin Spring Creek	t060700a	06-Jun-01	17:02:54	-118.0782602	48.63163767	30 feet E, 10 feet N
TS057	Pingston Creek	t060622b	06-Jun-01	15:52:21	-118.0825948	48.65214266	
TS058	Nancy Creek	t060621a	06-Jun-01	14:17:52	-118.1139929	48.65541396	5 feet E
TS059	Unnamed ephemeral tributary at T37N, R37E, Section 33	m060923a	09-Jun-01	16:36:07	-118.1155475	48.66880883	
TS060	Unnamed tributary T37N, R37E, Section 16, southwest qtr	t060617a	06-Jun-01	10:01:43	-118.1163399	48.69894892	
TS061	Unnamed ephemeral tributary at T37N, R37E, Section 22	t060619a	06-Jun-01	12:51:45	-118.0893608	48.69034757	10 feet N
TS062	Unnamed, across from Marcus Island T37N, R37E, Section 23	t060618a	06-Jun-01	11:53:06	-118.0761859	48.68646883	50 feet S
TS063	Unnamed ephemeral tributary at T37N, R38E, Section 28	m060900a	08-Jun-01	17:07:50	-118.032529	48.674347	20 feet SE
TS064	Unnamed ephemeral tributary at T37N, R38E, Section 22 (SW qtr)	q060818a	08-Jun-01	11:41:38	-118.014582	48.6910539	
TS065	Unnamed ephemeral tributary at T37N, R38E, Section 22 (NW qtr)	q060819a	08-Jun-01	12:21:07	-118.0151144	48.69373847	
TS066	Unnamed, spring drainage east of Evans Campground peninsula	q060819b	08-Jun-01	12:47:58	-118.0148863	48.69618122	
TS067	Deadman Creek	t060521a	05-Jun-01	14:04:19	-118.1268024	48.70725424	
TS068	Unnamed ephemeral tributary, T37N, R37E, Section 16, northwest qtr	t060617b	06-Jun-01	10:32:21	-118.1191119	48.71083339	
TS069	Unnamed tributary to Kettle River Arm, draining pond near Boyds	t060520a	05-Jun-01	13:26:48	-118.1288285	48.71741605	
TS070	Unnamed ephemeral tributary, T37N, R37E, Section 9, NW qtr, SE qtr	t060522a	05-Jun-01	15:49:53	-118.1187118	48.72085941	10 feet S
TS071	Unnamed ephemeral tributary, T37N, R37E, Section 9, NW qtr, NE qtr	t060523a	05-Jun-01	16:44:01	-118.1188507	48.72315992	120 feet upstream (E)

Station ID	Station Description	Data File	GPS Date	GPS Time	Longitude	Latitude	Distance/ Direction to Sample Location
TS072	Unnamed ephemeral tributary, T37N, R38E, Section 4, NE qtr	t060521b	05-Jun-01	14:59:23	-118.117169	48.73722253	
TS073	Matsen Creek	t060518b	05-Jun-01	11:59:09	-118.1317881	48.73857207	
TS074	Doyle Creek	t060518a	05-Jun-01	11:28:32	-118.1322592	48.74096216	30 feet S
TS075	Kettle River	t060517a	05-Jun-01	10:02:21	-118.1231085	48.74804728	
TS076	China Creek	m052200a	21-May-01	17:18:10	-118.0337611	48.71413716	
TS077	Unnamed tributary south of Snag Cove	t052218a	22-May-01	11:18:25	-118.0528747	48.72516913	
TS078	Unnamed ephemeral tributary at T38N, R37E, Section 36 (SW qtr)	t052220a	22-May-01	13:50:52	-118.0639858	48.74391456	
TS079	Unnamed ephemeral tributary entering river at T38N, R37E,Section 35 (NE qtr)	t052221a	22-May-01	14:57:23	-118.0635258	48.75206898	
TS080	Unnamed tributary directly across from Bossburg, WA	t052223a	22-May-01	16:09:19	-118.0559778	48.75829918	
TS081	Dilly Lake ephemeral tributary	t052300a	22-May-01	17:10:43	-118.0403655	48.77095646	
TS082	Unnamed ephemeral tributary upstream of Dilly Lake ephemeral tributary	t052300b	22-May-01	NA	-118.0381389	48.76994444	
TS083	Unnamed ephemeral tributary at T38N, R38E, Section 21	t052318a	23-May-01	11:03:39	-118.0088445	48.77559496	
TS084	Unnamed ephemeral tributary at T38N, R38E, Section 22	t052319a	23-May-01	12:23:03	-118.0039804	48.77945341	
TS085	Unnamed ephemeral tributary at North Gorge Campground	t052321a	23-May-01	14:09:33	-118.0010716	48.78578034	
TS086	Unnamed ephemeral tributary at T38N, R38E,Section 17 (NW qtr)	t052321b	23-May-01	14:50:14	-118.013923	48.79681448	
TS087	Unnamed ephemeral tributary downstream of Lodgepole Cr at T38N, R38E,Section 8 (NW qtr)	t052322B	23-May-01	NA	-118.01455	48.80916389	
TS088	Lodgepole Creek	t052323c	23-May-01	16:44:36	-118.0119258	48.81094806	

Station ID	Station Description	Data File	GPS Date	GPS Time	Longitude	Latitude	Distance/ Direction to Sample Location
TS089	Unnamed ephemeral tributary at T38N, R38E, Section 10	m052323a	23-May-01	16:56:54	-117.9942305	48.81178515	
TS090	Fifteenmile Creek	q060823a	08-Jun-01	16:43:39	-117.9878564	48.82014294	
TS091	Unnamed ephemeral tributary at Flat Creek	q060822b	08-Jun-01	16:05:56	-117.9782773	48.8223694	30 feet S
TS092	Flat Creek	q060822a	08-Jun-01	15:04:11	-117.9780477	48.82304915	
TS093	Unnamed ephemeral tributary downstream of China Bar	m052419a	24-May-01	12:19:19	-117.9409649	48.82060811	
TS094	Unnamed ephemeral tributary at T39N, R39E, Section 25 (SW qtr)	m052420a	24-May-01	13:00:14	-117.9270315	48.8424334	
TS095	Crown Creek	m052420b	24-May-01	13:40:53	-117.9118321	48.85459859	
TS096	Rattlesnake Creek	m060818a	08-Jun-01	11:43:53	-117.9011426	48.85789975	
TS097	Unnamed ephemeral tributary downstream from Moses Spring Creek	m052423a	24-May-01	16:19:45	-117.8730999	48.88062481	
TS098	Moses Spring Creek	t052422a	24-May-01	15:51:04	-117.8577589	48.87557936	
TS099	Onion Creek	m060819a	08-Jun-01	12:58:06	-117.8462084	48.87318893	
TS100	Unnamed ephemeral tributary in T39N, R39E, Section 10	t052421b	24-May-01	14:42:25	-117.8409291	48.89026632	
TS101	Squaw Creek	m060917a	09-Jun-01	10:20:11	-117.8269884	48.89546073	
TS102	Unnamed tributary from nearshore ponds	t052421a	24-May-01	14:06:35	-117.8205032	48.90021192	
TS103	Fivemile Creek	t052418a	24-May-01	11:58:44	-117.7995787	48.8988877	
TS104	Bear Creek	m060916a	09-Jun-01	09:45:50	-117.8114682	48.90855778	
TS105	Deep Creek	m060817a	08-Jun-01	10:05:07	-117.7536441	48.93226648	
TS106	Big Sheep Creek	M053120a	31-May-01	13:36:48	-117.7653744	48.93923694	
TS107	Quartz Creek	M053119b	31-May-01	12:51:31	-117.7644435	48.93905546	
TS108	Goodeve Creek	M053122b	31-May-01	15:51:19	-117.734181	48.94296884	12 feet SW
TS109	Scriver Creek	M060117b	01-Jun-01	10:49:00	-117.7034734	48.9503596	6 feet N
TS110	Unnamed tributary NE of Gaging Station	M060120A	01-Jun-01	NA	-117.6398194	48.97556944	
US001 / UW001	Tributary to Tom Bush Creek; Melrose Mine	r062717b	27-Jun-01	10:13:06	-117.6461401	48.9463303	200 feet upstream
US002 / UW002	Flume Creek; Sullivan Mine	r062817a	28-Jun-01	10:00:48	-117.3850122	48.90289118	50 feet SE
US003 / UW002	Flume Creek South Fork	r062817b	28-Jun-01	10:50:08	-117.3932751	48.87175394	
US004	Linton Creek; Oriole Mine	r062820a	28-Jun-01	13:31:47	-117.4157795	48.85920965	30 feet W
US005	Unnamed tributary to Onion Creek; Van Stone Mine	r062516a	25-Jun-01	09:55:36	-117.7936562	48.77948285	

Appendix A—Upper Columbia River/Lake Roosevelt ESI DGPS Data

Station ID	Station Description	Data File	GPS Date	GPS Time	Longitude	Latitude	Distance/ Direction to Sample Location
US006	Unnamed tributary to Onion Creek; Van Stone Mine	r062521a	25-Jun-01	14:08:35	-117.7538496	48.75051462	
US007	Van Stone Mine soil	r062521c	25-Jun-01	14:42:04	-117.7530733	48.75045504	
US008	Van Stone Mine soil	r062522e	25-Jun-01	15:08:32	-117.7588411	48.75304501	
US009	Van Stone Mine soil	r062520a	25-Jun-01	13:13:40	-117.7437501	48.75748945	
US010	Unnamed tributary to Onion Creek; Van Stone Mine	r062519b	25-Jun-01	12:35:37	-117.743635	48.75676136	
UW004	Unnamed tributary to Onion Creek; Van Stone Mine	r062520b	25-Jun-01	13:57:19	-117.7538001	48.75052196	
US011 / UW005	Tributary to Deep Creek; Last Chance Mine	r062623a1	26-Jun-01	16:40:13	-117.6897252	48.86287034	
US012 / UW006	Deep Creek South Fork	r062619a	26-Jun-01	12:26:32	-117.6667266	48.76888098	
US013	Unnamed tributary to Deep Creek	r062617a	26-Jun-01	10:36:50	-117.6578943	48.6975981	180 feet
US014 / UW007	Unnamed tributary to Hunters Creek; Cleveland Mine	r062723a	27-Jun-01	16:30:13	-118.0401963	48.12127929	
US015	Unnamed tributary to Hunters Creek; Cleveland Mine	r062722b	27-Jun-01	15:58:06	-118.0296757	48.11797048	150 feet S
US016	Unnamed tributary to Hunters Creek; Cleveland Mine	r062721a	27-Jun-01	14:19:27	-118.0269789	48.11598579	

No DGPS coordinates available; coordinates shown are uncorrected.
NA: Not available.

APPENDIX B

FIELD SAMPLE RECORD FORMS

WESTON

UPPER COLUMBIA RIVER/LAKE ROOSEVELT ESI (TDD:01-02-0001-A)
SURFACE WATER FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF, HW, NA
Date: 5-15-01 Weather: SUNNY, WARM

Sampling Point Number: SW3 Time: 1120 Depth to Sampling Point: NA
Location Description: upstream of GC intake GPS File: 051519A
Uncorrected Coordinates: 47° 56' 31.19" N 118° 58' 04.27"
Corrected Coordinates:
Access Method: RV Monitor Sampling Method: Kemmerer bottle
Description of Sample (color, turbidity, odor): clear, colorless, no odor
WESTON Sample ID: RS-001-SW CLP #(s): JX428 / MJ08Y5
EPA Tracking Number: 01204103

Sample Container(s)	Quantity	Analysis
40 mL	2	VOC
1L poly	1	Metals
1L Glass	1	SVOC
1L Glass	1	Pest/PCB

Sampling Point Number: SW3 Time: 1130 Depth to Sampling Point: 32'
Location Description: upstream of GC intake GPS File: SAME AS ABOVE
Uncorrected Coordinates: SAME AS ABOVE
Corrected Coordinates:
Access Method: RV MONITOR Sampling Method: Kemmerer bottle
Description of Sample (color, turbidity, odor): clear, colorless, no odor
WESTON Sample ID: CR-003-SW CLP #(s): JX427 / MJ08Y4
EPA Tracking Number: 01204102

Sample Container(s)	Quantity	Analysis
40 mL	2	VOC
1L Poly	1	Metals
1L Glass	2	Pest/PCB
1L Glass	2	SVOC

Fathometer 31' DEPTH

Notes: INTAKE @ 1208'; LAKE ROOS. @ ~1240 ∴ intake 32' below sfc. Boat exhaust may have impacted VOAs.

Sampler's Signature:

photos SF1 4-5; photo 4 - samples, starboard side of vessel
photo 5 - likely GC pumphouse, port side of vessel facing S, to show location
photo 6 - RINSATE RS-001-SW
Photo 7-8 - SAMPLING METHOD

WESTON

UPPER COLUMBIA RIVER/LAKE ROOSEVELT ESI (TDD:01-02-0001-A)
SURFACE WATER FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF/HW
Date: 5-14-01 Weather: Rainy

Sampling Point Number: 1 Time: 1415 Depth to Sampling Point: N/A (pump house)
Location Description: GC Distribution GPS File: QØ51422A
Uncorrected Coordinates: 47° 55' 59.96"
Corrected Coordinates: 118° 59' 45.94"
Access Method: on foot Sampling Method:
Description of Sample (color, turbidity, odor): clear, colorless, NO ODOR
WESTON Sample ID: CR-001-SW CLP #(s): JX425/MJ08Y2
EPA Tracking Number: 01204100

Sample Container(s)	Quantity	Analysis
40 ml	2	VOC
1 L poly	1	TAL Metals
1 L glass	2	SVOC
1 L glass	2	PCB/pest

Sampling Point Number: 1 Time: 1425 ~~1420~~ SMF / 1435 Depth to Sampling Point: N/A (pump house)
Location Description: GC Distribution GPS File: QØ51422A
Uncorrected Coordinates: 47° 55' 59.96"
Corrected Coordinates: 118° 59' 45.94"
Access Method: on foot Sampling Method: spigot
Description of Sample (color, turbidity, odor): clear, colorless, NO ODOR
WESTON Sample ID: CR-002-SW CLP #(s): JX426/MJ08Y3
EPA Tracking Number: 01204101

Sample Container(s)	Quantity	Analysis
40mL	2	VOC
1L poly	1	TAL Metals
1L glass	2	SVOC
1L glass	2	PCB/Pest

Notes: MS/MSD volume

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF, NA

Date: 5-14-01 Weather: Rainy, Breezy

Location Description: North Dam Camp

Uncorrected GPS Coordinates: N 47° 56' 50.75" W 118° 57' 51.07"

Corrected GPS Coordinates: _____

GPS File Name: Q051502A Sampling Method: BOWL + SPOON

WESTON Sample No: CS-001-SD/CS-002-SD Water Depth to Sediment: N/A - exposed

CLP #s: MJ08Y7/MJ08Y6/JX429/JX430 Photograph: roll: SAF exposure: SAF 3

EPA Tracking No.: ~~01204106 SMF~~ 01204104 - 01204105 (field dup.)

Analyses: TAL METALS, TOC, PCB/DEST

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1900	SFC	Clayey silt grayish brown, few fine organics No visible slag. Sample material AIA whole silt; ~~sand w/ clay sandy silt w/ clay~~ SANDY CLAYEY SILT 30% SAND 70% silt/clay (30% clay 40% silt)

Notes: Med-coarse sandy beach (w/ silt); Sample consisted of flakes of fine-grained material dried in a line on the beach; Beach sand was inadvertently gathered along w/ fines
* Duplicate collected
GPS file collected @ 19:10 (~70 readings)

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: NA, SF

Date: 5-14-01 1800 Weather: cloudy windy

Location Description: CR2 - Crescent Bay Ramp

Uncorrected GPS Coordinates: N 47° 56' 51.22" W 118° 59' 10.51"

Corrected GPS Coordinates:

GPS File Name: Q051501A Sampling Method: bowl, spoon

WESTON Sample No: CR-003-SD Water Depth to Sediment: exposed

CLP #s: MJ 08Y8 Photograph: roll: SF1 exposure: 1-2

EPA Tracking No.: 01204106

Analyses: TAL Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1800	~3"	70% fines; sandy silty clay <5% gravel, 30% sand, 65% silt/clay, brownish gray, few organics; no observed slag (30% silt, 35% clay).

Notes: RS-001-SD collected 1730 from auger rinsate

GPS file @ 1722

18-24" sample abandoned w/ Patti Stone's permission.

She wants a core sample @ another location

photo 1 - rinsate

photo 2 - sample (sediment)

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SF, NA, HW
Date: 5.15.01
Weather: sunny, breezy
Location Description: Plum Point
Uncorrected GPS Coordinates: N 47° 57' 3.13"; W 118° 51' 58.17"
Corrected GPS Coordinates:
-# 122 ← GPS File Name: Q05152-0A
Sampling Method: Hand Auger
WESTON Sample No: CR-004-SD (A)
Water Depth to Sediment: NA - exposed
CLP #s: JX432 / MJ08V9
Photograph: roll: SMF1 exposure: 9+10+11+12
EPA Tracking No.: 01204107
Analyses: Pest/PCB, Metals, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1300	3-4"	clayey silt, (30% clay, 70% silt), 100% fines greenish gray, sulfur odor, no observed organics, no observed slag.

Notes: RS-001-SD collected @ 1245 (photo SMF1, 9)
photo #10 - Auger attempt - Augered ~ 3" Down; felt hard substrate - old deposits. Abandoned core sample, took surface spoon sample ~3-4" depth, trying to stay in recent material (photo SMF1 #11 + 12
Wrong Tracking # on white board in photo 10 + 11, corrected for photo 12. Altimiter is recording altitude >1300', clearly wrong. Est. elevation 9' above Lake level

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SF, HW, NA

Date: 5-17-01

Weather: Sunny

Location Description: Indulium, ~~sample~~ point 3 ~~GR-005-SMF~~

Uncorrected GPS Coordinates: N 48° 18' 1.81" W 118° 10' 21.58"

Corrected GPS Coordinates:

GPS File Name: M051717A

Sampling Method: Petit Ponar

WESTON Sample No: GR-005-SD

Water Depth to Sediment: 8'

CLP #s: JX433/MJ08Z0

Photograph: roll: SMF 1 exposure: 13-15

EPA Tracking No.: 0204110

Analyses: metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1000	4"	100% Fines; ~~silty clay~~ clay silt. Greenish brown, no observed organics or slag. "gloppy", saturated. 60% silt, 40% clay

Notes: photo 13 - Sample material in Dredge
14 - sample material being put into jars.
15 - Sample in jars
Lake Roosevelt @ 1246.5. Altimeter says 1243
GPS serial # 916124

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF WA, HW

Date: 5-17-01

Weather: Overcast

Location Description: South of Hall Creek - CRSMF

Uncorrected GPS Coordinates:

Corrected GPS Coordinates:

GPS File Name: M05 17176 SMF

Sampling Method: Petit Ponar

WESTON Sample No: CR-006-SD

Water Depth to Sediment: 3'

CLP #s: JX434/MJ0821

Photograph: roll: SMF 1 exposure: 16

EPA Tracking No.: 01204111

Analyses: Metals, TOC, Pest/PCB

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1045	4"	100% fines; clayey silt (60% silt, 40% clay), greenish brown, no observed slag or organics. gloppy, saturated, some rootlets

Notes: Sample time 1045

Small plants in site of dredger, discarded

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMT, WH, HW

Date: 5-17-01

Weather: p. sunny, breezy

Location Description: Mission Point (5)

Uncorrected GPS Coordinates: N 48° 21' 36.99" W 118° 11' 12.37"

Corrected GPS Coordinates: _____

GPS File Name: M051718.B

Sampling Method: petit ponar

WESTON Sample No: C2007-SD

Water Depth to Sediment: 12'

CLP #s: JX435 / MJ8822

Photograph: roll: SMF1 exposure: 17

EPA Tracking No.: C1204112

Analyses: metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1130	4"	<5% gravel (at most 1/2" long), >90% SAND (med-coarse) <5% SILT, no CLAY. small wood fragment observed. ~~no observed~~ SLAG, ~~no or~~ MICA fragments, black particles, not likely slag but some poss.

Notes: Sample time 1130. Sample location near apparent landslide

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, NA, HW
Date: 5-17-01
Weather: Cloudy, breezy
Location Description: North of Daisy Station (#6)
Uncorrected GPS Coordinates: N 48° 22 46.45" W 118° 10' 44.43"
Corrected GPS Coordinates:
GPS File Name: M051719A
Sampling Method: petit ponar
WESTON Sample No: CR-008-SD
Water Depth to Sediment: 12'
CLP #s: JX436/MJ0823
Photograph: roll: SMF1 exposure: ~~SMF~~ 19
EPA Tracking No.: C1204113
Analyses: Metals, PCB/Pest, TOC

48° 22.77
118° 10.74

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1230	Ø	No recovery
2	1233	Ø	No recovery
3	1235	1-2"	SILTY CLAY (100% fines) 60% clay, 40% silt, greenish brown (olive brown). No slag, no organics
4	1238	<1"	SAND - med-fine, not enough to retain
5	1239	1"	SAND - med-fine, some black particles (100% sand)
6	1242	Ø	No recovery
7	1245	Ø	No recovery

Notes: Sample time 1230 *COMPOSITE*

Grab 8 1248 1" SAND med-fine some black or dark particles (100% sand)
Sample very wet - losing material, didn't have time to drain dredge properly after one grab

Sample as a whole ~ ~~75~~ 65% sand material

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SM, NA, HW

Date: 5-17-01 Weather: Overcast

Location Description: ~~Between Little Jim & Barnaby Creeks~~ Southern Chinook Creek

Uncorrected GPS Coordinates: N 48° 24' 56.52" W 118° 11' 00.55"

Corrected GPS Coordinates:

GPS File Name: M051720.4 Sampling Method: petit ponar

WESTON Sample No: C2-C09-SD Water Depth to Sediment: 30.25

CLP #s: JX437/MJ0824 Photograph: roll: SMF1 exposure: 20:21

EPA Tracking No.: 01204114

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1400	0	No recovery
2	1402	4"	~~Clayey~~ silty fine sand w/ clay 0% gravel. 60% fine to very fine sand, 30% silt, 10% clay. Olive greenish-gray fine organics and rootlets, twigs. No observed slag. Sulfur odor (slight)

Notes: Original location (W. Bank) in front of landslide area; took XRF where - got no good returns for metals. Moved to E. Bank, taking bed sed sample.
Sample time 14:15
Photo 20 - West Bank
Photo 21 - Sample.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, NA HW

Date: 5-17-01 Weather: P. Sunny

Location Description: South of Chalk ~~Pt.~~ GRANDE Pt. – "Chalk Grande Point"

Uncorrected GPS Coordinates: N 48° 25' 49.07", W 118° 11' 34.93"

Corrected GPS Coordinates:

GPS File Name: MC51723A Sampling Method: bowl & spoon

WESTON Sample No: CR-010-SD Water Depth to Sediment: NA - exposed

CLP #s: JX438/MJ0825 Photograph: roll: SMF1 exposure: 22/23

EPA Tracking No.: 01204115

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1445	7"	Fine-med sand w/ silt & clay ~90% fine sand, ~5% silt, 5% clay. Clay material came from 6-7" bgs; brown, no obvious slag, some organics (small)

Notes: Neil scanned 3 locations w/ XRF. Collected small amounts of clamp material to analyze after drying back @ the room. He included a sample of "heavy mineral" placer deposits from soft, like the type I observed in earlier samples (CR-007-SD + CR-008-SD). Decided to take sample behind tree stump – all readings similar

photo 22 sample area being scanned w/ XRF.

photo 23 sample. GPS reading taken later @ 16:09

~1' above waterline

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: NA SMF HW

Date: 5-17-01 Weather: p. Sunny, breezy

Location Description: Barnaby Island

Uncorrected GPS Coordinates: N 48° 26' 31.05" W 118° 12' 48.44"

Corrected GPS Coordinates: _____

GPS File Name: M051722A Sampling Method: bowl + spoon

WESTON Sample No: CL-011-SD Water Depth to Sediment: N/A exposed

CLP #s: JX439/MJ08Z6 Photograph: roll: SMF1 exposure: 24

EPA Tracking No.: 01204116

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1547	0.5"	100% fines, fine silt/clay. gray. ~~M~~ No odor or observed slag. rootlets.

Notes: Collected flakes of fine material ~~at~~ after XRF confirmed highest readings at 4 mm site (screened 2 sides) and in surface material.

Material was in small depositional depression in exposed, vegetated plain SE of Barnaby Island, behind ridges between island + river.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF, NA, HW

Date: 5-17-01 — Weather: cloudy, breezy

Location Description: North of Quillisascut Creek (E BANK)

Uncorrected GPS Coordinates: 48° 27' 19.71" ; 118° 12' 16.55"

Corrected GPS Coordinates: 48° 27.32'N 118° 12.276'W

GPS File Name: M0517 23B — Sampling Method: petit PONAR

WESTON Sample No: CR-02-SD — Water Depth to Sediment: 7'

CLP #s: M50827 / JX440 — Photograph: roll: SMF2 exposure: 1

EPA Tracking No.: 01204117

Analyses: Metals, PCB/Pest, TOC,

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1645	2"	Clayey silt; 100% fines. Olive-greenish brown. No odor, no observed slag, no organics observed. (~60% silt, 40% clay) small "flakes" included, indicate recent deposition?
2	1654	2"	SAA

Notes: Sample time 1700

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, NA, HW

Date: 5 18 01 Weather: Sunny

Location Description: Second location (northern) North of Quillisascut Creek

Uncorrected GPS Coordinates: N 48° 27' 41.13" W 118 12' 9.88"

Corrected GPS Coordinates:

GPS File Name: MØ51817A Sampling Method: petit ponar

WESTON Sample No: CR-013-SD Water Depth to Sediment: 6.5'

CLP #s: JX441 / MJ0828 Photograph: roll: SMF2 exposure: 2

EPA Tracking No.: 01204118

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1020	3"	100% fines. Clayey silt (40% clay, 60% fine silt) olive-greenish brown, No odor, fine rootlets, No debris No observed slag. Clays also present as small scales or clumps ~1/16" Diam. (Saturated)

Notes: Sample time 1030. Water ~~depth~~ elevation observed yesterday @ noon @ Grand Coulee was 1236.6' MSL.

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, NA, HW

Date: 5-18-01 Weather: Sunny

Location Description: Between La Fleur Creek + French Rocks

Uncorrected GPS Coordinates: N 48° 29' 19.83" W 118° 11' 39.55"

Corrected GPS Coordinates: _____

GPS File Name: M051818A Sampling Method: bowl + spoon

WESTON Sample No: CR-014-SD Water Depth to Sediment: NA - exposed

CLP #s: JX442 / MJ08Z9 Photograph: roll: SMF2 exposure: 3+4

EPA Tracking No.: 01204119

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1100	4"	~~to~~ Clayey silt, <5% gravel (<1"), ~~NO~~ <1% SAND, 30-40% clay, 55->65% silt. Micaceous flakes observed. No odor. grayish brown color. No observed slag. Dry

Notes: Sample location is a dry vegetated mudflat south of French Rocks (photo 3), with a gravel ridge along southern end. Estimated elevation of sample point is ~4' above current water line (~1237). Neil is setting up to scan mudflat and an adjacent shallow depression. Neil also scanned the gravel ridge (fines + sand among cobbles). Readings not as high. Photo 4 - sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, NA, HW

Date: 5-18-01 Weather: p. sunny

Location Description: French Parks Mid-Channel bar

Uncorrected GPS Coordinates: 48° 29' 50.02" 118° 10' 12.44"

Corrected GPS Coordinates:

GPS File Name: M051819A Sampling Method: petit ponar

WESTON Sample No: CR-015-SD Water Depth to Sediment: 20'

CLP #s: JX 443 / MJ0900 Photograph: roll: SMF2 exposure: 5+6

EPA Tracking No.: 01204120

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1221	4"	Silty clay 100% fines (60% clay, 40% silt) olive-greenish brown, no odor, no observed. ~~organics or~~ slag. see note
2	1225	2"	SAA (same as above)
3	1228	2"	SAA

Notes: Sample time 12:30 MS / MSD

Sample appeared in dredge, as large "plates" of fine material. ~~1/ small~~ (~1/16") - reddish brown silty lenses w/ poss fine rootlets (look like hairs)

photo 5 - sample grab in dredge

photo 6 - sample in jars (sample time on white board says 12:15; correct sample time 12:30).

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, NA, HW

Date: 5-18-01

Weather: sunny

Location Description: North of French Lake

Uncorrected GPS Coordinates: N 48° 30' 16.22 W 118° 11' 09.83"

Corrected GPS Coordinates:

GPS File Name: M05182ØA

Sampling Method: bowl + spoon

WESTON Sample No: CR-016-SD

Water Depth to Sediment: NA - exposed

CLP #s: JX 444 / MJØ9Ø1

Photograph: roll: SMF2 exposure: 7+8

EPA Tracking No.: 01204121

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1330	7-8"	Sample 0% gravel 20% clay 40% silt 40% fine ~~sand~~ to very fine sand. Brownish gray - No odor. No slag observed, fine rootlets observed. Dry.

Notes: Neil Anick scanned 3 locations (photo 7).
Sampling area is exposed vegetated mudflat similar to that South of French Lake.
Deposit is ~1" crust of desiccated clay-rich plates. Going down to 8" bgs - alternated betw. thin beds (1" or so) of fine sand - silt - clay-rich material

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, NA, HW

Date: 5-18-01 Weather: SUNNY

Location Description: North of Bradbury Beach

Uncorrected GPS Coordinates: N48° 31' 9.98" W 118° 8' 47.63"

Corrected GPS Coordinates:

GPS File Name: AT051821A Sampling Method: bowl + spoon

WESTON Sample No: CR-017-SD Water Depth to Sediment: NA - exposed

CLP #s: JX445/MJ0902 Photograph: roll: SMF2 exposure: 9-10 + 11

EPA Tracking No.: 01204122

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1430	1"	95 100% fines. Silty clay. 55% 60% clay 40% fine silt 25% fine sand-sized mica flakes grayish brown. Dry. NO OBSERVED SLAG rootlets, fine organics + woody fragments. Dry.

Notes: NA scanned 3 locations. Photo 9 - shows him scanning 2nd location, the bare area to left of bucket in photo background is first location (finer sfc sed).

photo 10 - sampling sfc sed to show depth

photo 11 - sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, NA, HW

Date: 5-18-01

Weather: SUNNY

Location Description: HAAG Cove

Uncorrected GPS Coordinates: N 48° 33' 15.47" W 118° 08' 40.23"

Corrected GPS Coordinates:

GPS File Name: TØ51822A

Sampling Method: HAND AUGER

WESTON Sample No: CR-018-SD/

Water Depth to Sediment: NA - exposed

CLP #s: JX446/MJØ9Ø3

Photograph: roll SMF2 exposure: 12

EPA Tracking No.: 012 04123

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1530	0-6"	~~0% < 50% gravel SMF~~ 0% gravel 20% v fine MICACEOUS SAND, 30% clay, 50% silt. Grayish brown. No odor, No observed slag. some rootlets. dry.

Notes: Sample area is exposed vegetated mud flat. Surface comprised of clay rich material, as evidenced by cracking

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF, NA, HW

Date: 5-18-01 — Weather: SUNNY

Location Description: HAAG COVE

Uncorrected GPS Coordinates: N 48° 33' 15.47" W 118° 08' 40.23"

Corrected GPS Coordinates:

GPS File Name: T051822A — Sampling Method: hand auger

WESTON Sample No: CL-066-SD — Water Depth to Sediment: NA - exposed

CLP #s: JX550 | MJ09E2 — Photograph: roll: SMF2 exposure: 13

EPA Tracking No.: 01204124

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1545	18-24"	10% pebbles, 20% ~~v. fine micaceous~~ SMF SAND, 40% silt, 30% clay. Damp. Dark brown. No observed Slag. ~~or organics~~ fine organics.

Notes: Material brought up by auger contained ~30% pebbles that were discarded, up to 1.5".
Sand was present in sample as v. fine micaceous flakes and coarse grains.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, NA, HW

Date: 5-19-01

Weather: Cloudy, windy

Location Description: Flats south of Colville River

Uncorrected GPS Coordinates: N48° 34' 00.01" W118° 07' 15.30

Corrected GPS Coordinates:

GPS File Name: TQ5 19116A

Sampling Method: bowl + spoon

WESTON Sample No: CR-019-SN

Water Depth to Sediment: NA - exposed

CLP #s: JX447/MJ0904

Photograph: roll: SMF2 exposure: 14

EPA Tracking No.: 01204125

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0900	7" 6.5"	0% gravel 40 % sand 40 % silt 20 % clay sandy silt w/ clay. Abundant rootlets, dry. No obvious slag; sand does contain black particulates. No odor.

Notes: NA scanned 2 locations on exposed flat, one more vegetated than the other. Pb slightly higher in more veg. area, so took sample there.

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, NA, HW
Date: 5-~~20~~ SMF 01 5-19-01
Weather: cloudy, windy
Location Description: ~~Flats North of~~ Colville River (*Bay @ Colville River)
Uncorrected GPS Coordinates: N 48° 34' 36.69" W 118° 7' 2.53"
Corrected GPS Coordinates:
GPS File Name: T051917A
Sampling Method: ~~bowl & spoon~~ SMF petit ponar
WESTON Sample No: CR-020-SD
Water Depth to Sediment: ~~NA exposed~~ SMF 44
CLP #s: JX448/MJ0905
Photograph: roll: SMF-2 exposure: 15
EPA Tracking No.: 01204126
Analyses: Metals, PCB/Pest, TOC

48° 34.6
118° 7.04

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1045	5"	99-100% fines. Clayey silt 0% gravel <1% sand, 60% silt 40% clay. Slight sulfur odor. Dk gray/Dk brownish gray few ~~fi~~ fine rootlets, no observed slag. Material has gelatinous appearance

Notes: *Dry location very high, gravelly. Decided to take dredge sample to collect mud. Also, XRF scan of exposed seds showed rel. low concentrations.
Sample time 1045.
Some complications w/ GPS; boat GPS read 48° 34.599'
118° 07.073'
Neal commented PDOP requirements of SOP not flexible enough for boat drift.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, NA, HW

Date: 5-19-01

Weather: mostly cloudy

Location Description: South of Boise Cascade Log Boom

Uncorrected GPS Coordinates: N 48° 36' 30.40" W 118° 7' 23.72"

Corrected GPS Coordinates:

GPS File Name: T051918A

Sampling Method: petit ponar

WESTON Sample No: CL-023-SD

Water Depth to Sediment: 77'

CLP #s: JX451 / MJ0908

Photograph: roll: SMF2 exposure: 16

EPA Tracking No.: 01204127

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	11:18	4"	0% gravel 10% sand 50% silt 40% clay Dark gray, fine rootlets (few) organics. No observed slag sewage smell.

Notes: Sample collected while boat was directly up against SW corner of log boom area.

Sample time 1130.

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SPF NA, HW

Date: 5-29-01

Weather: cloudy / p sunny / drizzly

Location Description: South of suspected outfall

Uncorrected GPS Coordinates: N 48° 37' 17.78" W 118° 7' 13.00"

Corrected GPS Coordinates:

GPS File Name: T0519AC

Sampling Method: petit ponar

WESTON Sample No: CR-067 SD

Water Depth to Sediment: 50'

CLP #s: MT09E3 / JX551

Photograph: roll: SPF 2 exposure: 17-18

EPA Tracking No.: 01204128

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1153		No recovery
2	1155		No recovery (insufficient, fine sand)
3	1158		No recovery

Notes: insufficient recovery for sample after 2 attempts to 100'

- photo 17 → suspected outfall, showing manhole (12:05) @ top of bank, gravel fill extending down bank face.

photo 18 (12:45) - manhole observed marked "sewer" - pic took from cliff via zoom

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, NA, HW

Date: 5-21-01 Weather: SUNNY

Location Description: North of Rt 20/395 bridge

Uncorrected GPS Coordinates: N 48° 37' 38.50" W 118° 06' 50.87"

Corrected GPS Coordinates:

GPS File Name: M052116A Sampling Method: Petit Ponar

WESTON Sample No: CR-021-SD Water Depth to Sediment: 97'

CLP #s: JX449/MJ0906 Photograph: roll: SMF2 exposure: 19 & 20

EPA Tracking No.: 01214100

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0918	Ø	NO recovery
2	0920	Ø	NO recovery
3	0921	Ø	NO recovery

Notes: Consulted w/ Park Svc personnel. Agreed this location is poor sediment sampling location. Abandoned location

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SF, AB, SF, NA, AJ, HW

Date: 5/21/01

Weather: Sunny mid 70's

Location Description: China Creek

Uncorrected GPS Coordinates: N 48°42'51.20" W 118°2'11.8 sec.

Corrected GPS Coordinates:

GPS File Name: M052200A

Sampling Method: bowl + spoon

WESTON Sample No: TR-001-SD

Water Depth to Sediment: NA - exposed

CLP #s: MJ 0952

Photograph: roll SMF3 exposure: 8, 9 + 10 + 11

EPA Tracking No.: 01214101

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1715	1 inch	Silt with Sand + Clay ( ) Tan brown, 0 gravel 20% sand 40% silt 20% clay, no odor, no slag, roots + plant material dry

Notes: Photo 8 - Approach to China Creek.
Altimeter indicates 36' above current lake level, ~1' above mean high (?) altimeter is questionable.
Photo 9 - NA doing XRF of "creek bed" - SMF
Photo 10 - white board doesn't list photo 10.
Photo 11 - Sample.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, HN, NA, SF, AB

Date: 5-21-01 Weather: Sunny

Location Description: Marcus Flats Northeast of RT 20/395; NW of Marcus Spring Creek

Uncorrected GPS Coordinates: N48° 37' 59.31" W 118° 5' 11.77"

Corrected GPS Coordinates: _____

GPS File Name: M052117A Sampling Method: petit ponar

WESTON Sample No: CR-022-SD Water Depth to Sediment: 13'

CLP #s: JX400 / MT0907 Photograph: roll: SMF2 exposure: 21

EPA Tracking No.: 01214102

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1020	4"	0% gravel <1% sand, 60% silt, 40% clay, olive-greenish brown, no odor, no observed slag or organics

Notes: Sample time 1030

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SF, HB, AJ

Date: 5/22/01 — Weather: sunny / clear, wind 70's

Location Description: Lake Roosevelt near Snag Cove southern Sample

Uncorrected GPS Coordinates: 48° 43' 30.44" 118° 3' 10.32"

Corrected GPS Coordinates: _____

GPS File Name: T052218A — Sampling Method: bowl + spoon

WESTON Sample No: TR002 - SD — Water Depth to Sediment: NA

CLP #s: MJ 0953 — Photograph: roll: SF-1 exposure: 1

EPA Tracking No.: 01214103

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1045	≈ 1"	0%, 5% sand, 10% silt, 85% organic matter, dark brown, roots, leaves.

Notes: Location was collected above the waterline on a drainage area. Fenced in - sample collected below fence. No depositional environment or obvious streambed present - only the gulley. Collected the top A soil horizon

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: BMF, NA, HW, AB, SF

Date: 5-21-01

Weather: sunny

Location Description: Marcus Flats, SW of Pingston Creek

Uncorrected GPS Coordinates: N48° 38' 19.35" W118° 5' 6.37"

Corrected GPS Coordinates:

GPS File Name: M0521178

Sampling Method: petit ponar

WESTON Sample No: CR-024-SD

Water Depth to Sediment: 29'

CLP #s: JX452 / MJ0909

Photograph: roll: BMF2 exposure: 22+23

EPA Tracking No.: 01214104

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1045	4"	0% gravel 0% sand 60% silt 40% clay fine organics, slight sulfur odor, no observed slag. Dk olive-greenish gray

Notes: RS-002-SD collected, photo 22 (sm+z) rinsate time 1040
1255.3' → reported elevation @ midnight
Sample in dredge appeared brown @ sfc; dk gray w/ v. dark gray streaks below sfc.
sample time 1050

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF, AB, AJ

Date: 5/22/01 JB Weather: sunny/clear mid 70's

Location Description: Flats north of Swing Cove (#8)

Uncorrected GPS Coordinates: _____

Corrected GPS Coordinates: N 48° 44', 36.12", W 118° 3' 50.36"

GPS File Name: T052220A Sampling Method: bowl

* WESTON Sample No: TR005-SD Water Depth to Sediment: na

CLP #s: ~~[illegible]~~ MJ0954 JB Photograph: roll: 1 exposure: 4

EPA Tracking No.: ~~[illegible]~~ 01214105 JB

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1345	≈ 1"	15% gravel, 50% sand, 35% silt, dark brown, no odor, roots & bulbs - small.

Notes: Location above roadway, no distinctive channel, only gully. All grasses & shrubs, stripped the top grass/root layer ≈ ½" and took sample.

* TR-005-SD SMF

SMF 10-2-01 T38N, R37E, Sect 36, SW ¼

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, NA, SF, AB, HW

Date: 5-21-01 Weather: Sunny

Location Description: Across from Marcus Flats, West Bank

Uncorrected GPS Coordinates: N 48° 39' 8.54" W 118° 10' 30.03"

Corrected GPS Coordinates:

GPS File Name: M05 118A Sampling Method: bowl + spoon

WESTON Sample No: CR-025-SD Water Depth to Sediment: N/A exposed

CLP #s: JX453/ MJ0910 Photograph: roll: SMF2 exposure: 24+25

EPA Tracking No.: 01214106

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1200	sfc <1/4"	0 % gravel 50 % sand 40 % silt ~~SMF~~ 10 % clay grayish brown. DRY. No odor, No observed slag. Some organics

Notes: Neal screened 4 locations w/ XRF found highest readings in sfc layer of deposit; took only sfc layer ~1/4" thick

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF, AD, AJ

Date: 5/22/01 Weather: Sunny / Clear / mid 70's

Location Description: Across Bosburg (SW)

Uncorrected GPS Coordinates: N 48° 45' 7.64" W 118° 3' 48.68"

Corrected GPS Coordinates: _____

GPS File Name: T05222 1 A Sampling Method: bowl + spoon

* WESTON Sample No: TB004-SD Water Depth to Sediment: NA

CLP #s: ~~MJ0954~~ MJ0955 WB Photograph: roll: 1 exposure: 5

EPA Tracking No.: ~~01214107~~ 01214107 WB

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1455	≈ 1"	15% gravel, 50% sand, 35% silt, dark brown, no odor. roots + bone fragment., dry.

Notes: Went above the road. Better defined drainage, no water

⇒ All grassy, top layer of grass roots removed to sample,

* TR-004-SD SMF

SMF 10-25-01 T38N, R37E, Sect. 35, NE 1/4

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, AM, HW, SF, AB

Date: 5-21-01 Weather: Sunny

Location Description: Marcus Flats, W. of Pingston Creek

Uncorrected GPS Coordinates: N 48° 39' 11.95" W 118° 05' 30.75"

Corrected GPS Coordinates:

GPS File Name: M052119A Sampling Method: petit ponar

WESTON Sample No: CR-026-SD Water Depth to Sediment: 30'

CLP #s: JX454 / MJ0911 Photograph: roll: SMF3 exposure: 1-2

EPA Tracking No.: 01214108

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1230	3"	Sample 0% gravel 25% sand 40% silt 35% clay brown. No odor No observed slag. Some fine rootlets olive-greenish brown when homogenized. saturated
2	1243	2.5"	SAA 0% gravel 25% sand 40% silt 35% clay olive-greenish brown. saturated. No odor, No observed slag.

Notes: Sample in dredge - grab 1 - rust colored stuff; algae observed brown, black, rust-colored zones in material. Photo 1
Grab 2 - in dredge more uniform color
Photo 2 - sample; sample time 12:45

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF, AB, AJ

Date: 5/22/01 Weather: sunny / clear / mid 70's

Location Description: Flat - trib across from Boesburg (#10) west bank

Uncorrected GPS Coordinates: 48° 45' 29.277' 118° 3' 21.39"

Corrected GPS Coordinates: _____

GPS File Name: T052223A Sampling Method: bowl + spoon

WESTON Sample No: TR 006-SD Water Depth to Sediment: 2"

CLP #s: MJ 0954 Photograph: roll: 1 exposure: 6

EPA Tracking No.: 012141 ~~09 11 [illegible]~~ 09

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1550	≈ 1"	trace to 0% gravel, 60% fine sand, 30% silt, 10% clay mica, some organic debris, no odor or stain.

Notes: Trib has flowing water - hiked up to other side of road. Sampled from a small pool where finer sediments were observed. deep under canopy. ⇒ 1391 sample elevation lake level 1334

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF, AB, AT

Date: 5/21/01 Weather: sunny / clear mid 70's

Location Description: Flats north of Sandy Cove

Uncorrected GPS Coordinates: 48° 44' 38.54" 118, 3' 46.61"

Corrected GPS Coordinates:

GPS File Name: TO 522 19A Sampling Method: bucket & spoon

WESTON Sample No: TB005-SD Water Depth to Sediment: NA

CLP #s: MJ 0956 Photograph: roll: 1 exposure: 2 & 3

EPA Tracking No.: 0121 4109

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1210	≈ 1"	15%, 35 sand, 50% silt, Tan brown, no odor, no slag, dry

Notes:

NA ⇒ not above high water line - will have to x the road. - will re-sample and make a new sheet - (see attached)

Incorrect sampling location - SMF

Sampler's Signature:

37 Lake level

HH -

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SWF, NA, SF, HW, AB

Date: 5-21-00

Weather: sunny

Location Description: Marcus Flats, E. of Kamloops

Uncorrected GPS Coordinates: N48° 40' 10.49" W 118° 6' 2.05"

Corrected GPS Coordinates:

GPS File Name: M 05 21 20C

Sampling Method: petit ponar

WESTON Sample No: CR-027-SD

Water Depth to Sediment: 16'

CLP #s: JX455 / MJ0912

Photograph: roll: SWF3 exposure: 3

EPA Tracking No.: 012 14110

Analyses: Metals, PCB

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1315	Ø	no recovery
2	1320	~~2"~~ SWF 2"	0% gravel, 35% sand, 40% silt, 25% clay. Olive-greenish brown. Slight sewage odor. Some (few) organic particulates
3	1325	Ø	no recovery — no trip
4	1330	4"	SAA, 35% sand, 40% silt, 25% clay, etc

Notes: wrong exposure # on white board in photo

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF, AB, AJ

Date: 5/22/01 Weather: Sunny clear mid 70's

Location Description: Trib downstream from Bingslow Lake - southern sample (#11)

Uncorrected GPS Coordinates: N 48° 54' 15.52" 118° 02', 25.485

Corrected GPS Coordinates: _____

GPS File Name: T05 23 00 A Sampling Method: bowl + spoon

WESTON Sample No: TR007 - SD Water Depth to Sediment: ≈ ½ inch

CLP #s: ~~MJ 0957~~ MJ 0957 AB Photograph: roll: 1 exposure: 7

EPA Tracking No.: ~~01214141~~ 01214141 AB

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1705	≈ 1"	0% gravel, 30% sand fine, 60 silt, 10% clay lots of organics - leaves, roots, decaying smell.

Notes: Collected in meadow area above road.

(Dilly Lake ephemeral stream - SMF 10-23-01)

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, NA, SF, HW, AB

Date: 5-21-01 Weather: SUNNY

Location Description: ~~Across~~ from Marcus Flats NE

Uncorrected GPS Coordinates: N 48° 40' 45.81" W 118° 5' 05.13"

Corrected GPS Coordinates: _____

GPS File Name: M052121B Sampling Method: petit ponar

WESTON Sample No: CL-028-SD Water Depth to Sediment: 30'

CLP #s: JX456 / MJ0913 Photograph: roll: SM3 exposure: 5

EPA Tracking No.: 01214112

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1425	Ø	No recovery
2	1430	Ø	No recovery
3	1435	Ø	No recovery
4	1437	2"	0% gravel 25% sand 40% silt 35% clay olive-greenish brown. very small black lenses, fine organics, fine rootlet No obvious slag. Slightly gelatinous appearance
5	1445	1"	0% gravel 25% sand 40% silt 35% clay olive-greenish brown. fine rootlets, + woody organics, shell frags.

Notes: Sample time 1445

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF, AB, AJ

Date: 5/22/01 Weather: sunny / clear / mid 70's

Location Description: Trib downstream Glasgo Lake (northern sample) #1R

Uncorrected GPS Coordinates: N 48°, 46' 11.80", W 118°, 2' 17.30"

Corrected GPS Coordinates:

GPS File Name: T05 2300B ~~T05 2300B~~ SMF Sampling Method: bowl + spoon

WESTON Sample No: TR008 SD AB Water Depth to Sediment: NA

CLP #s: MJ 0959 MJ 0958 AB Photograph: roll: 1 exposure: 8

EPA Tracking No.: 0121 ~~14115~~ 012114113 AB

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1735	≈ 1"	0% to trace gravel, 30%, 30% sand fine, 40% silt, no odor roots, etc.,

Notes: collected above the water mark, on the bushes, no clear channel or drainage, just a small gravine

Location ~1,000' upstream from Dilly Lake ephemeral tributary SMF 10-25-01

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SWF, NA, SF, HW, AB

Date: 5-21-01 Weather: Sunny

Location Description: South of Marcus Island

Uncorrected GPS Coordinates: N 48° 39' 40.38" W 118° 5' 17.95"

Corrected GPS Coordinates: _____

GPS File Name: M05 2120 D Sampling Method: petit ponar

WESTON Sample No: CL-029-SD Water Depth to Sediment: 14'

CLP #s: JX457 / MJ0914 Photograph: roll: SWF3 exposure: 4

EPA Tracking No.: 01 214 114

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1352	1"	poor recovery, several plants (discarded)
2	1400	3"	0% gravel 35 % sand 40 % silt 25 % clay Olive-greenish brown, plant material v. black organics. saturated. sand includes black particulates, no obvious slag.

Notes: SAMPLE TIME 1415

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SF, AB, AJ

Date: 5/23/01

Weather: Sunny / clear / mid 70's

Location Description: East of marble mine

Uncorrected GPS Coordinates: 48° 46' 32.26" 118° 0' 32.01"

Corrected GPS Coordinates:

GPS File Name: T05231 8A

Sampling Method: bowl + spoon

WESTON Sample No: TR009-S

Water Depth to Sediment: NA

CLP #s: MJ 0959

Photograph: roll: 1 exposure: 10

EPA Tracking No.: 01214115

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1100	0 2"	0 to trace gravel, 40% sand-fine, 30% organics, 30% fine silt

Notes: Collected the sample up a steep ravine above the road level. ~20 feet above.

Location @ T38N, R38E, Sect. 21, unnamed ephemeral trib SMF 10-25-01

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SF, AB, AJ

Date: 5/23

Weather: sunny, clear mid 70s

Location Description: East of marble mines southern trib

Uncorrected GPS Coordinates: 48° 44' 21.32" 118° 00' 55.14"

Corrected GPS Coordinates:

GPS File Name: T0523164

Sampling Method: hand + spoon

WESTON Sample No: TR009-SD

Water Depth to Sediment: NA

CLP #s: MJ 0959

Photograph: roll: 1 exposure: 9

EPA Tracking No.: 01214155

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	945	≈ 1"	A horizon mostly decaying material, almost no soil, some fine sand.

Notes: Collected the sample up a steep ravine upstream of culvert above road and railroad tracks ≈ 20' above road level.

Wrong place! – we are still below the high lake level – re collect the sample (see attached sheet).

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, NA, HW, AB, RW, AJ

Date: 5-21-01

Weather: Sunny

Location Description: North of Sanner Island

Uncorrected GPS Coordinates: N 48° 41' 38.48" W 118° 01' 56.71"

Corrected GPS Coordinates:

GPS File Name: M05122A

Sampling Method: bowl & spoon

WESTON Sample No: CR-030-SD

Water Depth to Sediment: NA - exposed

CLP #s: JX458/MJ0915

Photograph: roll: SMF3 exposure: 6

EPA Tracking No.: 0121411~~4~~SMF 6

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1545	2"	0% gray ~~silt~~ 30% sand 40% silt 30% clay. Light Brownish gray. Dry, Sand is very fine to fine No apparent slag. rootlets

Notes: Neal sampled 2 areas on vegetated flat

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SF, AB, AJ

Date: 5/23/01

Weather: Sunny clear mid 80's

Location Description: South of north Grand Coulee campground - east bank (#14)

Uncorrected GPS Coordinates: 48° 46' 45.95" 118° 0' 14.37"

Corrected GPS Coordinates:

GPS File Name: T052319A

Sampling Method: bowl + spoon

WESTON Sample No: TR010-SD

Water Depth to Sediment: NA

CLP #s: MJ 0960

Photograph: roll: 1 exposure: 11

EPA Tracking No.: 0121417

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1220	≈ 21"	0% gravel, 95% sand, 5% or less silt, light tan brown, no odor, some organics (root, leaves)

Notes: Found the drainage behind the DOT gravel/mount. Area ≈ 1" under the pine needle bed, some sand; distinctive drainage.

Unnamed ephemeral tributary @ T38N, R38E, section 22 SAF 10-25-01

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF, NA, HW, AB, SF

Date: 5-21-01 — Weather: Sunny

Location Description: Evans Campground

Uncorrected GPS Coordinates: N48° 41' 47.37" W 118° 01' 23.97"

Corrected GPS Coordinates:

GPS File Name: M052123A — Sampling Method: Bowl + Spoon

WESTON Sample No: CR-031-SD — Water Depth to Sediment: NA - exposed

CLP #s: JX59/MJ0916 — Photograph: roll: SMF 3 exposure: 17

EPA Tracking No.: 01214118

Analyses: Metals, PCB/Pest, TOC.

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1635	1"	0% gravel 30 % sand 40 % silt 30 % clay light brownish gray. dry. No odor, no apparent slag. rootlets + some plant material from site.

Notes: Meal scanned 2 locations on vegetated mud flat.
Sample time 1645

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SF, AB, AJ

Date: 5/23/01 — Weather: sunny / clear / mid 80's

Location Description: TR AJ north Gorge Campground

Uncorrected GPS Coordinates: 48° 47' 08.98" 118° 0' 3.95"

Corrected GPS Coordinates: _____

GPS File Name: T052321A — Sampling Method: hand + spoon

WESTON Sample No: TR011-SD — Water Depth to Sediment: ≈ ½"

CLP #s: MJ 0961 — Photograph: roll: 1 exposure: 12

EPA Tracking No.: 01214119

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1410	≈ ½"	60% ~~gravel~~ organics, 10% sand, 30% silt, trace clay, dark brown organics (roots, plants). no odor.

Notes: Collected sample at small trickle that crossed the road and tracks and fed the wetland area by the entrance of the camp ground.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: BMF, NA, SS, HW, AB

Date: 5-21-01 — Weather: Sunny, warm (70s)

Location Description: EAST of SNAG COVE

Uncorrected GPS Coordinates: N 48° 43' 53.15" W 118° 02' 57.03"

Corrected GPS Coordinates:

GPS File Name: MDS2200B — Sampling Method: petit ponar

WESTON Sample No: CR-032-SD — Water Depth to Sediment: 30'

CLP #s: JX460/MJ0917 — Photograph: roll: BMF3 exposure: 12

EPA Tracking No.: 01214120

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]	Grainsize class
1	1745	2"	strange cottony paper-like material in dredge - Discarded grab	
2	1749	1"	0% gravel/65-70 % sand. 30 % silt, <5 % clay Dark olive brown. Sand is fine to v. fine, including black minerals. No obvious slag. fine organic particles	2
3	1752	Ø	No recovery	
4	1755	1"	Same as Grab #2	2
5	1758	1"	0% gravel, 80 % sand 20 % silt 0% clay Dk olive brown, sand is fine to medium, including black minerals No obvious slag fine organic particles.	1

Notes: Based on the above percentages, sample estimated @ 70% sand 27% silt, 3% clay

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF, NA, HW

Date: 5.22.01 — Weather: Sunny, warm

Location Description: South of Bossburg

Uncorrected GPS Coordinates: N 48° 45' 3.160" W 118° 3' 13.40"

Corrected GPS Coordinates:

GPS File Name: M052217A — Sampling Method: petit ponar

WESTON Sample No: CR-033-SD — Water Depth to Sediment: 30'

CLP #s: JX4111/MJ0918 — Photograph: roll: SMF3 exposure: 13-14

EPA Tracking No.: 01214122

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0938	Ø	~~SMF insuff~~ No recovery
2	0941	Ø	No recovery
3	0945	Ø	insuff. recovery
4	1000	1"	0% gravel 30 to 40% sand 60% silt ~~5%~~ 10% clay dry, light grayish brown. fine rootlets. Sand is very fine to fine-grained. No obvious slag, no odor.

Notes: Kept to hill. Neal having trouble getting sufficient GPS reception. He suggested we take reading before and after sampling. After 3rd dredge attempt, looked onshore for sampling location. Found some apparently river-deposited seds among cobbles - Neal scanned 2 locations w/ XRF

photo 13 - sample location photo 14 - sample - wrong exposure # (13) on white board. Sample time (1000) not noted

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF, AB, MT

Date: 5/23/01 Weather: sunny/clear mid 80's

Location Description: Tree downstream of Hellgate Creek.

Uncorrected GPS Coordinates: 48° 48' 32.89" 118° 0' 52.38" (bad/short file)

Corrected GPS Coordinates: _____

GPS File Name: TOS 2322 A Sampling Method: bowl + spoon

WESTON Sample No: TR01-SD B - from road Water Depth to Sediment: NA

CLP #s: MJ 0943 Photograph: roll: SF/ exposure: 14

EPA Tracking No.: 012141 23

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1555	≈ 1"	10% gravel, 60% fine sand, 30% silt, light tan brown, organics (roots/leaves/sticks), dry.

Notes: Location is up the road 210 feet no water - some water seepage at lake level - deep gulley at lake level GPS not stable + short bad reading at location. An attempt on road.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF, NA, HW

Date: 5-22-01 — Weather: Sunny, 70s

Location Description: North of Bossburg

Uncorrected GPS Coordinates: N 48° 45' 31.17 W 118° 02' 48.63"

Corrected GPS Coordinates: _____

GPS File Name: M052217B — Sampling Method: hand + spoon

WESTON Sample No: CL034-SD — Water Depth to Sediment: N.A - exposed

CLP #s: JX462/MJ0919 — Photograph: roll: SMF3 exposure: 15+16

EPA Tracking No.: 01214124

Analyses: TAL Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1052	5"	0% gravel 40% sand 45% silt 15% clay Dry, light grayish brown. No ~~obv~~ slag. rootlets (fine). Sand is very fine to fine.

Notes: Neil scanned 3 locations. Sample location was ~~[illegible]~~ w/in ~1' of lake level.

photo 15 - XRF screening & ~~sample location~~

16 - sample

Sample time 1100

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SF, AB, AJ

Date: 5/23/01

Weather: sunny / clear / mid 80's

Location Description: Lodgepole Creek

Uncorrected GPS Coordinates: 48° 48' 39.35" 118°, 0' 33.19"

Corrected GPS Coordinates:

GPS File Name: T05 2323C

Sampling Method: bowl + spoon

WESTON Sample No: TR014 - SD

Water Depth to Sediment: ≈ 2"

CLP #s: MJ 096764

Photograph: roll: 1 exposure: 15

EPA Tracking No.: 01 4125

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1640	≈ 1"	0% gravel, 60% sand, 35% silt, 5% clay, Dark brown, organics (roots, leaves) no odor.

Notes: location above the road on stream bed - biggest stream so far. Real running water. Collected sediment from a pool where fine sediments were observed

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF, NA, HW

Date: 5-22-01 — Weather: Sunny, 70's

Location Description: South of North Gorge (West Bank)

Uncorrected GPS Coordinates: N 48° 47' 30.56" W 118° 00' 48.69"

Corrected GPS Coordinates:

GPS File Name: M0522 818A — Sampling Method: bowl & spoon

WESTON Sample No: CR-035-SD — Water Depth to Sediment: N/A - exposed

CLP #s: JX4103 / MJ0920 — Photograph: roll: SMF3 exposure: 17 + 18

EPA Tracking No.: 01214126

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	12:00	1/4"	5% gravel 30 % sand ~~60~~ 55 % silt 10 % clay dry, lightgrayish brown. No slag, fine rootlets, organic present as granules. Sand ranges from v. coarse to mostly fine to ~~v~~ fine.

Notes: Sample location ~12-15' Above current water level. Location is A terraced bluff. Sample material is thin crust of fine-grained material on top of coarse sand/gravel deposit. (Photo 17).

Sample time 12:00

MS/MSD - SMF 6-18-01

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SAF, NS, HW

Date: 5-24-01 Weather: sunny, hot

Location Description: Trib #23 : Downstream of China Bregaron

Uncorrected GPS Coordinates: N 48° 49' 14.03" W 117° 56' 27.14

Corrected GPS Coordinates:

GPS File Name: MOS 2419A Sampling Method: bowl + spoon

WESTON Sample No: TR 017-SD Water Depth to Sediment:

CLP #s: MJ0967 Photograph: roll: 8NF3 exposure: 2+3

EPA Tracking No.: 01214127

Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1215	20	0% gravel 50% sand 40% silt 10% clay ~~to~~ moist, med-dark brown. Highly organic. no slag

Notes: Photo 2 - Neal scanning spot in streambed, lake in bkgrnd but looks like it hasn't flowed for a long time except for minor contribution from valley walls. Neal scanned 2 locations

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, NA, HW

Date: 5-22-01 Weather: sunny 70s

Location Description: South of North Gorge (EAST BANK)

Uncorrected GPS Coordinates: N 48° 47' 11.05" W 118° 00' 25.29"

Corrected GPS Coordinates: _____

GPS File Name: M05 2220 A Sampling Method: bowl + spoon

WESTON Sample No: CR-036-SD Water Depth to Sediment: N/A - exposed

CLP #s: JX4641 | MJ0921 Photograph: roll: ~~SMF-3~~ exposure: 19+20

EPA Tracking No.: 01214128

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1400	1"	0% gravel 30 % sand 40 % silt 25 % clay dry, light grayish brown. Rootlets + small woody fragments. No slag observed. No odor. Sand is very fine to fine.

Notes: Took sfc crust of fine material on vegetated exposed bar ~3' above water level (current) (photo 19) photo 20 - sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, NA, HW

Date: 5-23-01 Weather: sunny, hot

Location Description: ephemeral stream (point 20 on chart) T38N, R38E Sec 10

Uncorrected GPS Coordinates: N 48° 48' 42.28" W 117° 59' 39.32"

Corrected GPS Coordinates: _____

GPS File Name: M052323A Sampling Method: bowl + spoon

WESTON Sample No: TR-016 SD Water Depth to Sediment: N/A - dry

CLP #s: MTC968 Photograph: roll: SMF4 exposure: 23

EPA Tracking No.: 01214129

Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1645	2"	1 % gravel 80 % sand 10 % silt 0 % clay highly organic soil. (no slag)

Notes: Heather noted red alders in stream channel ranging from 5-15 yrs old. She said these are generally used as indicators of floodplains

Sample was collected from adjacent to culvert passing under current RR tracks, on east side

SMF 10-25-01 Location Description: T38N, R38E, Section 10

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, NA, HW

Date: 5-22-01 Weather: Sunny, upper 70s

Location Description: ~~North of~~ SMF EAST Flat Creek

Uncorrected GPS Coordinates: N 48° 49' 14.09" W 117° 58' 43.39"

Corrected GPS Coordinates:

GPS File Name: M052222A Sampling Method: bowl + spoon

WESTON Sample No: CR-037-SD Water Depth to Sediment: N/A - exposed

CLP #s: MJ ~~4625~~ 0922 / JX465 Photograph: roll: SMF3 exposure: 21+22, 23+24

EPA Tracking No.: 01214130

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1500	1/4"	0% gravel ~~50~~ 45 % sand 45 % silt 10 % clay Dry, light grayish brown. No obvious slag, minor organic matter. No odor Sand is very fine - fine
2	1515	2"	<1% gravel 70% sand 30% silt 0% clay Dry to damp, brown.
			Sample as a whole: <1% gravel (as granules 60% sand 40% silt <1% clay. Sand is v fine to coarse, includes fine sand sized black glassy particles (poss. slag). Lt brown dry.

Notes: Neal scanned 2 locations on West side of creek; we crossed creek + scanned one location on east bar. (photo 21)
Sample consisted of 1/4" crust of fine material that was deposited on a relatively cleaner fine sand.
Photo 22 - Mouth of Flat Creek, looking downstream
Photo 23 - Boat moving technique

over

Sampler's Signature: [signature]

photo 24 - sample location, sample ~~in jars~~ in jars, exposed suspected slag-containing layer

Neal did scan on underlying sand material, found higher zinc, so I collected that material and dug down to coarse cobbles. Found black sand-sized material as well. Possible slag. Neal did XRF on adjacent location & found very high metal levels.

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, NA, HW

Date: 9-24-01

Weather: sunny, hot

Location Description: N 48° 50' 32.99" W 117° 55' 36.85"

Uncorrected GPS Coordinates: TR-018-SD

Corrected GPS Coordinates: _____

GPS File Name: MOS2420A

Sampling Method: bowl & spoon

WESTON Sample No: TR-018-SD

Water Depth to Sediment: N/A dry

CLP #s: MT0969

Photograph: roll: SMF5 exposure: 4+5

EPA Tracking No.: 01214131

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1300	2-3"	1% gravel (as granules) 40% sand (fine) 50% silt, 10% clay moist, grayish brown, 2% organics. No slag.

Notes: photo 4 stream bed
Real second 2 locations
Photo 5 - sample.

Location: T39N, R39E, section 25, SW 1/4 SMF 10-25-01

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 | Sampling Personnel: SMF, NA, HW

Date: ~~5-22-00~~ SMF 5-22-01 | Weather: Sunny, warm

Location Description: China Bar

Uncorrected GPS Coordinates: N 48° 49' 41.72" W 118° 55' 33.30"

Corrected GPS Coordinates: _____

GPS File Name: MOS2223A | Sampling Method: bowl, spoon

WESTON Sample No: CR-038-SD | Water Depth to Sediment: N/A - exposed

CLP #s: JX466 / MT0923 | Photograph: roll: SM-4 exposure: 1-4

EPA Tracking No.: 012141 32

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1630	2"	5% gravel as fine gravel 60% sand 30% silt < 5% clay and granules. Sand as v. fine to coarse grains including fine-med sand-sized sump etc. Slag. Slag ~ 1" thick in some places

Notes: photo 1 - suspected slag @ Chine Bar sfc. deposit
Neal says XRF returned very high readings. Suspected observed release. Black sand-sized material observed. Widespread throughout several areas of Chine Bar.
photo 1 + 2 → slag on beach
3+4 - Sample - white board incorrect
Slag layer in photo ~ 2-3' above water, but site is at all elevations

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SWF, NA HW

Date: 5-24-01

Weather: Sunny, hot

Location Description: Crown Creek (trib #25)

Uncorrected GPS Coordinates: N 48° 51' 16.57" W 117° 54' 42.13"

Corrected GPS Coordinates:

GPS File Name: M05 2420 B

Sampling Method: bowl + spoon

WESTON Sample No: TR-019-SD

Water Depth to Sediment: 1"

CLP #s: M00970

Photograph: roll: SWF5 exposure: 6 + 7

EPA Tracking No.: 01214133

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1345	2"	0% gravel 60 % sand 40 % silt 0 % clay Saturated, med grayish brown. ~10% organics no slag

Notes: Collected among marsh ~1" water
photo 6 - sampling
photo 7 - sample
GPS - taken in deep ravine setting.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF NA, KW

Date: 05-29-01 Weather: Sunny, clear

Location Description: South of Crown Creek (Rate Cove)

Uncorrected GPS Coordinates: N 48° 50' 14.35" W 117° 55' 30.10"

Corrected GPS Coordinates: _____

GPS File Name: M052317A Sampling Method: bowl + spoon

WESTON Sample No: CR-029-SD Water Depth to Sediment: NA - exposed

CLP #s: JX467 / MJ0924 Photograph: roll: SMF4 exposure: 5-7

EPA Tracking No.: 0121413-4

Analyses: Metals PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1015	3"	15 % gravel 55 % sand 30 % silt 0 % clay gravel present as granules + fine gravel. Sand is very fine to v. coarse, includes fine sand-size black suspected slag. Dry brown + black. no odor

Notes: did exploratory hand auger ~100' south of light (photo 5) in grassy area, down to ~2'. Some black grains observed among fine sand, but not as obvious as among rocks to north and @ China Bend site.

Sample point + observed slag @ sfc among boulders

Zinc >1,000 ppm (XRF)

Photo 6+7 - sample - exposure #s not completely on photo 6 white board

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, NA, HW
Date: 5 24 01
Weather: Sunny, hot
Location Description: TRIB #27 Downstream from Moses Spring Creek
Uncorrected GPS Coordinates: N48° 52' 50.02" W 117° 52' 23.05"
Corrected GPS Coordinates:
GPS File Name: M052423A
Sampling Method: bowl + spoon
WESTON Sample No: TR-020-SA
Water Depth to Sediment: NA, exposed
CLP #s: MJ0971
Photograph: roll: RMF5 exposure: 8, 9, + 10 + 11
EPA Tracking No.: 01214135
Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1615	3"	0 % gravel 40 % sand 40 % silt 20 % clay Med-dk gray, saturated. Cow manure + woody organics + grass. No slag observed.

Notes: 8 - creek from river
9 - No trespassing signs near ~~at~~ SMF upland access pt
10 - sample loc
11 - sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, NA, HW

Date: 5-23 01

Weather: Sunny, hot (upper 70s)

Location Description: NE of Rattlesnake Creek (~~[illegible]~~ East Bank)

Uncorrected GPS Coordinates: N 48° 51' 58.17" W 117° 52' 43.82"

Corrected GPS Coordinates:

GPS File Name: M052318A

Sampling Method: bowl & spoon

WESTON Sample No: CR-040-SD

Water Depth to Sediment: N/A - exposed

CLP #s: JX468/MJ0925

Photograph: roll: SMF4 exposure: 8, 9+10-11

EPA Tracking No.: 01214136

Analyses: Metals, Pest/PCB, TOC.

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1130	4"	0% gravel 65-70% sand 30% silt <5% clay dry, grayish brown. Sand is v fine to fine, ~10-20% slag. Minor shell material.

Notes: Heal scanned ~5 places in this cove. Observed (suspected) slag near north point on beach (photo 9) east of point. Suspected slag in thin layer ~1-2" below sfc. (photo 8) another poss slag-containing layer ~4" BGS. Stopped @ 4" BGS so as not to dilute concentration.

More-abundant suspected slag found on rocks @ point. Didn't sample because it is archaeological site (per. Lay Dupuydt). (Photo 10)

Sampler's Signature: [signature]

Photo 11 - sample

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SF, AM, AJ

Date: 5/24/01

Weather: [illegible]

Location Description: Across from Plain Creek and King [illegible] Moses Spring Creek [illegible]

Uncorrected GPS Coordinates: 48°52'32.09" 117°51'27.93"

Corrected GPS Coordinates:

GPS File Name: T052422A

Sampling Method: bowl + spoon

WESTON Sample No: TR 022-SD

Water Depth to Sediment: 1

CLP #s: MT 0972

Photograph: roll: SF 1 exposure: 21

EPA Tracking No.: 01214137

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1530		

Notes: Sample was collected by Al + Adelaine - they went down the steep bank towards the water. They collected the sample from the dry stream bed

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF, NAL, ITW

Date: 5-23-01 — Weather: sunny, hot

Location Description: N. of Onion Creek / West of Kaner Siding

Uncorrected GPS Coordinates: N 48° 52' 29.78" W 117° 50' 46.52"

Corrected GPS Coordinates: _____

GPS File Name: M052319A — Sampling Method: hand-spoon

WESTON Sample No: CR-041-SD — Water Depth to Sediment: N/A - exposed

CLP #s: JX469 / M50926 — Photograph: roll: SMF 4 exposure: 12, 13 + 14

EPA Tracking No.: 01214138

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1245	2"	1% gravel (as granules) 74% sand 25% silt 0% clay. Suspected slag makes up ~1/3 sand material. Sand is brown (light grayish brown), dry. minor shell material.

Notes: Had scanned ~4 locations at one array earlier. One of the locations (near sample loc.) was scanned @ 2 depths. Sand material needed cobbles @ ~2" bgs.

photo 12 - site area

photo 13 - ~~sample~~ SMF People preparing to fish to SE of sample pt

photo 14 - sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF, AB, AJ

Date: 05/24/10 Weather:

Location Description: South of Sylvan creek - trib # 20 T39N, R39E, Sec 10 [illegible]

Uncorrected GPS Coordinates: 48° 53' 25.00" 117° 50' 27.39"

Corrected GPS Coordinates:

GPS File Name: T05 24 21 B Sampling Method: [illegible] + spoon

WESTON Sample No: TR 023 - SD Water Depth to Sediment: NA

CLP #s: MJ 0973 Photograph: roll: SF 1 exposure: 20

EPA Tracking No.: 01214139

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1435	≈ 1.5"	% gravel, ≈ 60% organics, 30% sand 10% silt, Dark brown, roots, plant material.

Notes: Sample collected upgradient side of road or upgradient from the culvert.

Location: T39N, R39E, sect 10
SF 10-25-01

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, NA, HW
Date: 5.23.01
Weather: Sunny, hot
Location Description: S tip of Island NW South of SMF ~~SQUAW~~ CREEK
Uncorrected GPS Coordinates: N 48° 52' 42.40" W 117° 50' 48.53" ONION
Corrected GPS Coordinates:
GPS File Name: M052320A
Sampling Method: bowl & spoon
WESTON Sample No: CR-042-SD
Water Depth to Sediment: N/A - exposed
CLP #s: TX470/MJ0927
Photograph: roll: SMF4 exposure: 15-16 & 17
EPA Tracking No.: ~~0102~~ SMF 01214140
Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1315	~3"	<1% gravel (as granules), 90% ~~100%~~ SMF sand, 10% silt, <1% clay dry, light grayish brown, minor shell material no organics observed. Suspected slag accounts for ~30-~~45~~% of sand material

Notes: photo 15 - CR-041-SD site, from across river
XRF is keeping, complaining about the heat.
photo 16 - sample
photo 17 - sample loc. from river ~10' above waterline

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF, AB, AJ

Date: 05/24/01 Weather:

Location Description: North of Squaw Creek - West bank Unnamed Drainage from Nearshore Pond

Uncorrected GPS Coordinates: 48° 54' 0.68' 117° 49' 13.77"

Corrected GPS Coordinates:

GPS File Name: T05 2421 A Sampling Method: bowl & spoon

WESTON Sample No: TR-024-SD Water Depth to Sediment:

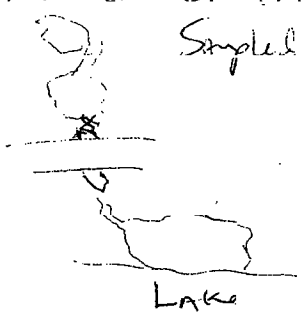
CLP #s: MJ0974 Photograph: roll: SF1 exposure: 17

EPA Tracking No.: 01214141

Analyses: TAI

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1325	≈ 1"	0% gravel, 20% sand, 80% silt, light tan brown, 100% sg grasses, no odor.

Notes: Location downstream from the culvert / Road was only ≈ 1 or 2 feet above the waterline - too close - went to ponds on upstream side of road - Culvert is very high - ponds are dry and are fenced property. Collected sample at the toe of the culvert where water might be Sampled beneath the fence.



Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, NA, HW

Date: 5-23-01 Weather: sunny, hot

Location Description: S. tip of Island South of Squaw creek

Uncorrected GPS Coordinates: N 48° 53' 14.95" W 117° 50' 6.47"

Corrected GPS Coordinates:

GPS File Name: M05232 1A Sampling Method: bowl + spoon

WESTON Sample No: CR-0436D Water Depth to Sediment: NA - exposed

CLP #s: JX 471/MJ0928 Photograph: roll: SMF exposure: 18+19

EPA Tracking No.: 01214142

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1400	1-2"	0% gravel 90% sand 10% silt 0% clay. dry, lt reddish brown. minor organics. black, suspected slag material makes up ~50% sand material (med-sand-sized).
			Sand as a whole is very fine to fine to medium.

Notes: Brownish-red stain in wide area of gravel bar, pass. coming from Squaw Creek. High metals, incl. low Hg detected @ sampling pt. via XRF. Sampling pt ~10' above water line (photo 18)

Neal screened 4 places, we picked highest conc. pt amid red-stained rocks.

Photo 19 - sample - sample time 1400 - whiteboard says exposure 18

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SF, AH3, AJ

Date: 05/24/0.

Weather: sunny/clear/low 80's

Location Description: Five Mile Creek

Uncorrected GPS Coordinates: 48° 53' 55.95" 117° 47' 38.51"

Corrected GPS Coordinates:

GPS File Name: T052418A

Sampling Method: bowl + spoon

WESTON Sample No: TR025-SD

Water Depth to Sediment: ≈12 in

CLP #s: MJ 0975

Photograph: roll: SF1 exposure: 14

EPA Tracking No.: 01214143

Analyses: TAL metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1145		0% to more, 85% sand - fine grained, 15% silt, All white limestone fragments, Tan brown. wet sample. no odor, some (little) organics.

Notes: Located at creek ~~about~~ (11) upstream from the road: at a small pool at the creek ≈ 15 ft above the culvert

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SWF, NA, HW

Date: 5-23-01

Weather: sunny, hot (88)

Location Description: ~~S. top of Island~~ N of Fivemile Creek

Uncorrected GPS Coordinates: N 48° 54' 51.60" W 117° 47' 50.98"

Corrected GPS Coordinates: _____

GPS File Name: M0523 22A

Sampling Method: bowl & spoon

WESTON Sample No: CR-44-SD

Water Depth to Sediment: NA - exposed

CLP #s: JX472 / MS0929

Photograph: roll: SWF-4 exposure: 20, 21

EPA Tracking No.: 01214144

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1515	2"	10% gravel (fine) 90% fine - very coarse sand (70% suspected slag material). Minor shell material. Damp. no observed organics or odor

Notes: photo 20 - sample area
photo 21 - sample

* location not on an island

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, Scott Dubble, HV

Date: 5-31-01

Weather: Sunny, warm

Location Description: Beach @ Northport

Uncorrected GPS Coordinates: N 48° 55' 21.48" W 117° 46' 19.67"

Corrected GPS Coordinates: _____

GPS File Name: M053117A

Sampling Method: bowl & spoon

WESTON Sample No: CL-045-SA

Water Depth to Sediment: N/A - exposed

CLP #s: JX473 / MJ0930

Photograph: roll: SF1 exposure: 22, 23

EPA Tracking No.: 01224150

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1045	~4"	0% gravel 90-100% sand <10% silt, 0% clay. Fine-med sand ~70% slag material. Native sand is light brown. Dry. No organics observed. occ. small dry clumps of silty v. fine sand - grayish brn.

Notes: Camera + film likely used by Trib team last week (roll # unknown)
Sample time 1045.
Sample location ~ ft above current water level (~12.71 ft).
Photo 22 - Scott screening sediment w/ XRF. He screened 3 locations total.
Photo 23 - Sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, SD, HW

Date: 5-31-01 Weather: SUNNY, WARM

Location Description: Flats North of Big Sheep Creek

Uncorrected GPS Coordinates: N 48° 56' 17.89" W 117° 45' 40.71"

Corrected GPS Coordinates:

GPS File Name: M053119A Sampling Method: bowl + spoon

WESTON Sample No: CR-046-SD Water Depth to Sediment: N/A - exposed

CLP #s: JX474/MJ0931 Photograph: roll: SF1, exposure: 25 / 21 tb

EPA Tracking No.: 01224151

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1215	3"	SMF % gravel 80 % SAND ≤ 20 % SILT 0 % clay Sand is very fine to fine. Dry, light grayish brown. Suspected black slag particles as fine sand ~20-30% of sand. ~~[illegible]~~ some Rootlets + other organics. Gravel as granules

Notes: Potential Sampling Loc., Facing North - SF1, #25

Scott scanned 3 locations

~~SMF~~ ~~[illegible]~~ observed ~~observed~~, SMF

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, SD, HW

Date: 5-31-01 Weather: sunny, hot

Location Description: Big Sheep Creek

Uncorrected GPS Coordinates: N 48° 56' 21.25" W 117° 45' 55.40"

Corrected GPS Coordinates: _____

GPS File Name: M053120A Sampling Method: bowl + spoon

WESTON Sample No: TR-026-SD Water Depth to Sediment: N/A - exposed

CLP #s: JX552 / MJ0976 Photograph: roll: SF1 exposure: 24

EPA Tracking No.: 01224153 SMF 6 5+6

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1345	2"	10 % gravel (as granules) + fine gravel 50 % sand 40 % silt 0% clay. Dry, light grayish brown. Sand v. fine to v. coarse. No observed slag. Minor plant material debris.

Notes: SF1 #24 Mouth of Big Sheep Creek
SMF 6 #5 Sample Location
5 #6 Sample

*MS/MSD

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, SD, HW

Date: 5/31/01

Weather: sunny hot

Location Description: ~~Queen~~ Guaranty Creek

Uncorrected GPS Coordinates: N 48°, 56' 20.61" W 117° 45' 51.88"

Corrected GPS Coordinates: _____

GPS File Name: M053129 B

Sampling Method: bowl + spoon

WESTON Sample No: TR-027-SD

Water Depth to Sediment: n/a - dry

CLP #s: MJ0977

Photograph: roll: ~~SF1~~ SMF 6 #2+3+4 6 Bags, exposure: ~~24 SMF~~

EPA Tracking No.: 01224152

Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1300	3.4"	<10% gravel 50% sand 30% silt <10% clay Abundant rootlets + plant material. Dry, grayish brown gravel present as granules. sand as v. fine to fine grains No observed slag. Some mollusc shells.

Notes: SE1, ~~#4~~ Mouth of Sheep Creek, facing W SF

SMF6 #2 - setting

SMF6 #3 - sample location - note cobbles + gravel

SMF6 #4 - sample.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, SD, HW

Date: 5-31-01

Weather: SUNNY, hot

Location Description: Steamboat Rock

Uncorrected GPS Coordinates: N 48° 56' 11.41" W 117° 45' 11.73"

Corrected GPS Coordinates:

GPS File Name: M053121A

Sampling Method: hand-spoon

WESTON Sample No: CR-047-SD

Water Depth to Sediment: N/A - exposed

CLP #s: JX475 / MJ0932

Photograph: roll: SMF-6 exposure: 7+8+9

EPA Tracking No.: 01224152

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1430	1"	5 % gravel 95% sand (>75% is black slag) 0% silt, 0% clay. Minor trace organic material. No odor

Notes: photo 7 - floating slag material
sample collected ~ 10' SE of where GPS was recorded
photo 8 - sample area
photo 9 - sample
Sample location was < 1' above current water level

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMT, SD, HW

Date: 5-31-01 Weather: Sunny, hot

Location Description: Flats NE of Steamboat Rock

Uncorrected GPS Coordinates: N 48° 56' 16.29" W 117° 44' 29.39"

Corrected GPS Coordinates:

GPS File Name: M053122A Sampling Method: bowl & spoon

WESTON Sample No: CR-048-SD Water Depth to Sediment: N/A exposed

CLP #s: JX476 / MJ0933 Photograph: roll: SMT 6 exposure: 10, 11 + 12

EPA Tracking No.: 01224155

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1515	1"	<1 % gravel 100 % sand 0% silt 0% clay Native sand is dry, light grayish brown. Slag ~90% of sample. ~~Minor organics~~ No organics in sample.

Notes: Sample location area is exposed beach
Sample time 1515
photo #10 - floating slag
collected sfc material high in slag
photo #11 - sample loc
photo 12 - sample
Sample point ~4' above water line

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SNF, SD, HW
Date: 5.31.01
Weather: Sunny, warm
Location Description: Goodene Creek
Uncorrected GPS Coordinates: N 48° 56' 34.84 W 117° 44' 03.13"
Corrected GPS Coordinates:
GPS File Name: M0531226
Sampling Method: bowl + spoon
WESTON Sample No: TR-028-SD
Water Depth to Sediment: N/A, Dry
CLP #s: JX553 / MJ0978
Photograph: roll: SNF ~~6~~ 5 6 exposure: 13, 14+15
EPA Tracking No.: 01224156
Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1545	4.5"	0 % gravel 50 % sand 40 % silt 10 % clay Moist, DK grayish brown, Abundant roots + plant organics No odor, No observed slag.

Notes: photo 13 - view of River from sampling location
14 - Sample location + sample in bowl
GPS recorded ~ 12' NE of sample loc.
15 - sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, SD, HW

Date: 5-31-01 Weather: sunny, hot

Location Description: North of Goodeve Creek

Uncorrected GPS Coordinates: N 48° 32' 25.24" W 117° 43' 52.40"

Corrected GPS Coordinates: _____

GPS File Name: M053123A Sampling Method: bowl - spoon

WESTON Sample No: CR-049-SD Water Depth to Sediment: N/A - exposed

CLP #s: JX477 / MJ0934 Photograph: roll: SMF 6 exposure: 16, 17

EPA Tracking No.: 01224157

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1630	~3"	100% v. fine to fine sand ~60-70% slag material

Notes: photo 16 sample area
photo 17 sample

*MS/MSD

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, SD, HW

Date: 6-1-01 Weather: cloudy, warm

Location Description: SW of Scriver Creek (Point bar on W. bank)

Uncorrected GPS Coordinates: N 48° 56' 31.61" W 117° 43' 14.51"

Corrected GPS Coordinates: _____

GPS File Name: M060117A Sampling Method: bowl + spoon

WESTON Sample No: CR-05A-SD Water Depth to Sediment: NA - exposed

CLP #s: JX478 / MJ0935 Photograph: roll: SMF ~~5~~ 6 TB exposure: 18+19+20

EPA Tracking No.: 01224160

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0930	1-2"	0 % gravel 100 % sand 0 % silt 0 % clay. Slag material >70% of sand. No odor, no organics; Native material is light brown. Sample is moist

Notes: Photo 18 - Animal tracks crossing sand bar to river, noting black sand concentration

Scott screened 3 locations, picked 3rd photo 19

Scott altered PDOP setting to 9 because we couldn't get a reading after ~15-20 min.

~~NOTE - wrong film roll # (6 instead of 5) on whiteboard~~ TB

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, SD, HW

Date: 6 1-01

Weather: Cloudy, cool

Location Description: Scriver Creek

Uncorrected GPS Coordinates: N 48° 57' 01.28" W 117° 42' 12.59"

Corrected GPS Coordinates:

GPS File Name: M060117B

Sampling Method: bowl + spoon

WESTON Sample No: TR-029-SD

Water Depth to Sediment: 3"

CLP #s: JX554 / MT0979

Photograph: roll: SMF ~~6~~ 6 XB exposure: 21+22+23

EPA Tracking No.: 01224161

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1050	3"	5 % gravel 55 % sand 30 % silt 10 % clay SATURATED, brownish gray. Sand is v. coarse to very fine Some rootlets + organics No odor. No slag.

Notes: Small cabin to North of Creek; knocked on door, nobody answered so preceded w/ sampling.

photo 21 sample location

22 Scriver Creek sampling area

23 sample

Scott stood in clearing ~ 2 meters South of sample loc. to get GPS reading.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, SD, HW
Date: 6-01-01
Weather: cloudy, cool
Location Description: South of Tom Bush Creek
Uncorrected GPS Coordinates: N 48° 37' 58.66" W 117° 39' 42.01"
Corrected GPS Coordinates:
GPS File Name: M060118A
Sampling Method: bowl-spoon
WESTON Sample No: CR-051-SD
Water Depth to Sediment: N/A exposed
CLP #s: JX479 / MJ0936
Photograph: roll: SMF 6 exposure: 24, 25
SMF 7 : 1
EPA Tracking No.: 01224162
Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1145	2"	1 % gravel 74 ~ 75 % sand 25% silt < 1 % clay gravel as fine cobbles and granules, sand is v. fine to fine (mostly fine). Small black particulates make up ~ 25% of sample - poss slag

Notes: photo 24 - sampling location area
25 - sample SMF 7 #1 - also sample, extra photo
sample location ~1' above current water line
Scott estimated this as a medium concentration sample.

(is correct) ~~Note - wrong~~ film roll # (6 instead of 5) on white ~~board~~ - SMF

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, SD, HW

Date: 06 01 01

Weather: windy, cloudy, cool

Location Description: Black Sand Beach

Uncorrected GPS Coordinates: N 48° 38' 15.73" W 117° 38 52.53"

Corrected GPS Coordinates:

GPS File Name: M060119A

Sampling Method: bowl & spoon

WESTON Sample No: CR-052-SD

Water Depth to Sediment: NA - exposed

CLP #s: JX4X0 / MJ0937

Photograph: roll: SMF ~~6~~ 7 exposure: 2+3

EPA Tracking No.: 01224163

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1230	4"	100% SAND (>80% slag) NO organics, NO odor. Black w/ minor native sand (brown)

Notes: Scott scanned 1 location due to incoming bad weather
Sample pt ~ 3' above current water line
photo 2 - sample
3 - Sample Area

(this correct AB) Note: Wrong film roll # (7 instead of 6) on whiteboard SMF

Sampler's Signature: [signature]

WESTON

MANAGERS DESIGNERS CONSULTANTS

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, SD, HW

Date: 6-1-01 Weather: cloudy, cool

Location Description: Boulder bar near bridge - (S. of rocky island)

Uncorrected GPS Coordinates: N 48° 59' 52.77" W 117° 38' 07.52"

Corrected GPS Coordinates: _____

GPS File Name: M 0601 21A Sampling Method: bowl - spoon

WESTON Sample No: CR-053-S1 Water Depth to Sediment: N/A - exposed

CLP #s: JX481 / MJ0938 Photograph: roll: SMF 67 exposure: 7+9

EPA Tracking No.: 01224164

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1415	3"	0 % gravel 85 % sand 15 % silt 0 % clay Sand material ~50% black slag particulates as fine sand, somewhat finer than at some downstream points. No organics or odor observed

Notes: (transcribed from field log book 6-2-01)
photo 7 - Scott Dubble near sample location (from offshore). We screened approx. 4 locations. We lift him to look @ rocky island to north, but decided on good bar!
#8 - sample location; #9 = sample (~1' above water level

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, SD, HW

Date: 6-1-01

Weather: cloudy, cool

Location Description: Unnamed trib NE of Fogging Station

Uncorrected GPS Coordinates: N 48° 58' 32.65" W 117° 38' 23.35"

Corrected GPS Coordinates: _____

GPS File Name: MU60120A

Sampling Method: bowl + spoon

WESTON Sample No: TR-030-SD

Water Depth to Sediment: N/A - dry

CLP #s: JX555 / MJ0980

Photograph: roll: 6 exposure: 4-6

EPA Tracking No.: 01224165

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1330	8"	~1% gravel 85% sand ~13% silt ~1% clay High organic debris content + peat. No slag observed.

Notes: transcribed from field log book 6-2-01
photo 4 - (dry) trib mouth (from river)
5 - sample location
6 - sample
Sfc to ~3" has pine needles (cleared away, sampled ~5" below that.

Sampler's Signature: [signature]

WESTON

MANAGERS DESIGNERS CONSULTANTS

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / AB

Date: 6/3/2001 Weather: OVERCAST 60°F

Location Description: LITTLE JIM CREEK

*Uncorrected GPS Coordinates: N 48°22'05.53" W 118°11'35.68"

Corrected GPS Coordinates: _____

GPS File Name: T060317A Sampling Method: BOWL / SPOON

WESTON Sample No: TR 070 SD Water Depth to Sediment: 1-2"

CLP #s: MJ09F2 Photograph: roll: JMF 5 exposure: 15

EPA Tracking No.: 01234050

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	935	2 in.	3(0% GRAVEL / 60% SAND / 40% SILT / 0% CLAY), DARK BROWN, NO ODOR, NO SLAG, TWIGS PINE NEEDLES, NO DEBRIS

Notes: · PHOTO # 15 ROLL 5 TAKEN FACING WEST.
· SAMPLE TAKEN ~10' ABOVE FULL POOL (ELEVATION.)
· SAMPLE TAKEN ~100' ABOVE FULL POOL (DISTANCE)
* GPS READING ~300' FROM SAMPLE LOCATION. DOWNSTREAM, ~50' FROM CONFLUENCE WITH COLUMBIA.

Sampler's Signature: [signature]

WESTON
MANAGERS DESIGNERS/CONSULTANTS

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: KB/AB
Date: 6/3/2001
Weather: OVERCAST ~60°F
Location Description: WEST OF MISSION POINT T33N R39E SECTION 18 SMF
Uncorrected GPS Coordinates: N 48° 21' 34.~~77~~ 54" W 118° 11' 37.~~89~~ 84" KB
Corrected GPS Coordinates:
GPS File Name: T0603173
Sampling Method: BOWL / SPOON
WESTON Sample No: TR-068-SD
Water Depth to Sediment: NO WATER (DRY TRIB.)
CLP #s: MJ09F0
Photograph: roll: SMF 5 exposure: 16
EPA Tracking No.: 01234051
Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1045	3"	(0% GRAVEL / 40% FINE SAND / 60% SILT / 0% CLAY), DARK BROWN, NO ODOR OR SLAG, SCATTERED ROOTS, CHARCOAL.

Notes:
- PHOTO R5 E16 TAKEN FACING WEST
- SAMPLE COLLECTED ~ 5' ABOVE FULL POOL ELEVATION
- SAMPLE COLLECTED ~ 150' UPSTREAM OF FULL POOL
- GPS READING TAKEN ~20' NE OF SAMPLE LOCATION.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/AB

Date: 6/3/2001 Weather: OVERCAST 65°F

Location Description: HALL CREEK

Uncorrected GPS Coordinates: N 48° 18' 14.92" W 118° 12' 11.56"

Corrected GPS Coordinates:

GPS File Name: T0600320A Sampling Method: BOWL/SPOON

WESTON Sample No: TR 061 SD Water Depth to Sediment: 1-2"

CLP #s: MJ09E6/JX559 Photograph: SMP roll: 5 exposure: 17

EPA Tracking No.: 01234052

Analyses: METALS, TOC, PCB/PEST

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1315	1-2"	(0% GRAVEL/90% F-M SAND/10% SILT/0% CLAY), GREYISH BROWN, NO ODOR OR SLAG, SOME TWIGS, NO DEBRIS
2	1315	1-2"	" "
3	1315	1-2"	" "

Notes: • PHOTO TAKEN FACING SW
• SAMPLE COLLECTED ~5' ABOVE FULL POOL ELEVATION
• SAMPLE COLLECTED ~100 UPSTREAM OF FULL POOL LEVEL
•

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: KB / AB

Date: 6/3/2001

Weather: OVERCAST 60°F

Location Description: UNNAMED TRIB T32N, R37E, SEC 8

Uncorrected GPS Coordinates: N 48° 17' 34.55" W 118° 10' 22.86"

Corrected GPS Coordinates:

GPS File Name: TO60322A

Sampling Method: BOWL / SPOON

WESTON Sample No: TR 058 SD

Water Depth to Sediment: DRY TRIB

CLP #s: MJ09E4

Photograph: roll: SMF 5 exposure: 18

EPA Tracking No.: 01234053

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1500	2-3"	(0% GRAVEL / 30% FINE SAND / 65% SILT / 0% CLAY), BROWN, NO ODOR OR SLAG NO ORGANICS, NO DEBRIS

Notes:
- PHOTO TAKEN FACING WEST
- SAMPLE COLLECTED ~1' ABOVE FULL POOL ELEVATION
- SAMPLE COLLECTED ~20' UPSTREAM FROM FULL POOL
- GPS READING TAKEN ~300' EAST OF SAMPLE COLLECTION LOCATION.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/AB/HW

Date: 6/4/2001 Weather: OVERCAST 60°F

Location Description: ~~STRANGER CREEK~~ STR 10-25-01 Unnamed T33N R37E Sect 28 SNF

Uncorrected GPS Coordinates: N 48° 19' 27.41" W 118° 09' 04.99"

Corrected GPS Coordinates:

GPS File Name: T060421C Sampling Method: Bowl / SPOON

WESTON Sample No: TR 060 SD Water Depth to Sediment: DRY TRIB

CLP #s: MJ09E5 / JX558 Photograph: roll: KB1 exposure: 4, 5

EPA Tracking No.: 01234054

Analyses: METALS / PCB/PEST / TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1430	4"	(5% GRAVEL / 75% FINE SAND / 20% SILT / 0% CLAY), LIGHT BROWN, NO ODOR OR SLAG, SCATTERED ROOTS, NO OTHER DEBRIS
2	1430	"	"
3	1430	"	"

Notes:
- PHOTO 4 TAKEN FACING W
- PHOTO 5 TAKEN FACING
- SAMPLE LOCATION ~ 100' UPSTREAM FROM HWY 25.

Sampler's Signature: [signature]

WESTON
MANAGERS DESIGNERS/CONSULTANTS

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: KB / AB / HW
Date: 6/4/2001
Weather: OVERCAST 60°F
Location Description: UNNAMED T33N, R37E, SEC 28 Unproposed Location SMF 10-25-01
Uncorrected GPS Coordinates: N 48° 20' 04.15" W 118° 09' 21.48"
Corrected GPS Coordinates:
GPS File Name: T060500A
Sampling Method: BOWL / SPOON
WESTON Sample No: TR063SD
Water Depth to Sediment: DRY TRIB
CLP #s: MJ09E8
Photograph: roll: KB1 exposure: 8/9
EPA Tracking No.: 01234055
Analyses: METAL

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1645	3"	0% GRAVEL / 100% COARSE AND FINE SAND / 0% SILT / 0% CLAY), BROWN, NO ODOR OR SLAG, OCCASIONAL TWIGS, NO OTHER DEBRIS

Notes:
- PHOTO 8 TAKEN FACING E
- PHOTO 9 TAKEN FACING E
- ~~GPS~~ SAMPLE LOCATION ~ 20' E OF HWY 25
- GPS LOCATION ON HWY 25

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: AB / KB / HW

Date: ~~6/3/2001~~ 6/4/2001 KB Weather: LIGHT RAIN: 55°F

Location Description: MAGEE CREEK

Uncorrected GPS Coordinates: N 48° 21' 38.17" W 118° 09' 45.26"

Corrected GPS Coordinates:

GPS File Name: T060419A Sampling Method: SPOON / BOWL

WESTON Sample No: TR067 SD Water Depth to Sediment: 2"

CLP #s: MJ09E9 Photograph: ~~SMF 5~~ roll: KB 1 exposure: ~~25~~ 1 ~~22~~ KB

EPA Tracking No.: 01234056

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1245	4"	(0% GRAVEL / 75% COARSE TO FINE SAND / 25% SILT / 0% CLAY), GREYISH BROWN. NO ODOR OR SLAG, OCCASIONAL ROOTS / TWIGS, NO OTHER DEBRIS

Notes:
- PHOTO ~~SMF 5~~ ~~25~~ ~~22~~ KB TAKEN FACING ~~W~~ NE
- PHOTO KB 1 1 TAKEN FACING W
- SAMPLE LOCATION ~ 50' UPSTREAM FROM HWY 25

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / AB / HW

Date: ~~6/3/2001~~ 6/4/2001 KB Weather: OVERCAST 60°F

Location Description: JENNINGS CREEK

Uncorrected GPS Coordinates: N 48° 21' 55.93" W 118° 09' 49.89"

Corrected GPS Coordinates: _____

GPS File Name: T0604 21A Sampling Method: BOWL / SPOON

WESTON Sample No: TR 069 SD Water Depth to Sediment: 2"

CLP #s: MJ0971 Photograph: roll: KB1 exposure: 2, 3

EPA Tracking No.: 01234057

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1400	3"	0% GRAVEL / 90% COARSE TO FINE SAND / 10% SILT / 0% CLAY), LIGHT BROWN, NO ODOR OR SLAG, OCCASIONAL TWIGS, NO OTHER DEBRIS.

Notes: 1 PHOTO 2 TAKEN FACING SE.
1 PHOTO 3 TAKEN FACING SE
1 SAMPLE LOCATION ~ 25' UPSTREAM OF HWY 25.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: KB/AB/HW
Date: 6/4/2001
Weather: OVERCAST 60°F
Location Description: UNNAMED T 33N R 37E ~~S28~~ S21 STAF 10-25-01
Uncorrected GPS Coordinates: N 48° 20' 21.65" W 118° 09' 26.71"
Corrected GPS Coordinates:
GPS File Name: T060422A
Sampling Method: BOWL / SPOON
WESTON Sample No: ~~TR063 SD~~ TR065 SD KB
Water Depth to Sediment: 1"
CLP #s: MJ09E7
Photograph: roll: KB1 exposure: 6/7
EPA Tracking No.: 01234058
Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	~~1575~~ 1550 KB	3"	(20% FINE GRAVEL / 80% FINE, COARSE SAND / 0% SILT / 0% CLAY), BROWN, NO ODOR OR SLAG, SCATTERED ROOTS, NO OTHER DEBRIS.

Notes:
- PHOTO 6 TAKEN FACING SW * WESTON SAMPLE # SHOULD BE TR065 SD
- PHOTO 7 TAKEN FACING NE
- SAMPLE LOCATION ~ 300' UPSTREAM FROM HWY 25.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF SD

Date: 6-3-01 Weather: cloudy, cool (60s)

Location Description: Unnamed Tributary (T34N, R36E, Section 36)

Uncorrected GPS Coordinates: N48° 24' 33.23" W 118° 12' 52.23"

Corrected GPS Coordinates:

GPS File Name: M060317A Sampling Method: bowl + spoon

WESTON Sample No: ~~CC~~ T-075-SD Water Depth to Sediment: 0" (~@ waterline)

CLP #s: MJ09F4 SMF Photograph: roll: SMF 7 exposure: 10 & 11

EPA Tracking No.: 01234059

Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1030	2.5"	0% gravel 10% sand 50% silt 40% clay hydrogen sulfide odor. Dark gray, moist. Some plant material. Deposit was gelatinous, fine-grained to ~2" bgs, then sandy + cobbly. Sand is fine-med grained

Notes: wrong photo #s on white board ("11+12" on board)
photo 10 - sample location undisturbed
" - Sample
Also, R37E on whiteboard, should be R36E

Sampler's Signature: [signature]

WESTON
MANAGERS DESIGNERS/CONSULTANTS

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, SD

Date: 6-3-01 Weather: cloudy, 60's

Location Description: Unnamed tributary, T34N, R31oE Section 25

Uncorrected GPS Coordinates: N 48° 25' 4.58" W 118° 12' 50.25"

Corrected GPS Coordinates:

GPS File Name: M0600319A Sampling Method: bowl + spoon

WESTON Sample No: TR-076-SD Water Depth to Sediment: Dry

CLP #s: MJ0955 Photograph: roll: ~~SMF 6~~ 7AB exposure: 12

EPA Tracking No.: 01234060

Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1100	1.5"	0% gravel 20% sand 55% silt 25% clay Dry, light brownish gray. Some plant debris (incl. pine bark) No odor, no slag. Sand is very fine to fine

Notes: photo 12 - sample
GPS reading ~34' E + ~30' S from sample location due to overhead tree canopy.

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, SD

Date: 6-3-01

Weather: sunny, 60s

Location Description: Barnaby Creek

Uncorrected GPS Coordinates: N 48° 26' 01.11" W 118° 13' 19.77"

Corrected GPS Coordinates:

GPS File Name: M060320A

Sampling Method: bowl + spoon

WESTON Sample No: TR-081-SD

Water Depth to Sediment: 1-2"

CLP #s: MJ09F6 [illegible]

Photograph: roll: SMF 6 7 AB exposure: 13+14

EPA Tracking No.: 01234061

Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1300	1-2"	10 % gravel 40 % sand 50 % silt 0 % clay DK brown, saturated, abundant fine organic particles. No slag. Algae-odor. Gravel is fine, sand is v. fine to v. coarse, mostly fine.

Notes: photo 13- Sample Area
14- Sample; white board is positioned over subaqueous sampling location - where fines were deposited

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SWF, SD

Date: 6-3-01

Weather: cloudy, 60's

Location Description: Unnamed tributary (T.34N R.36E, Section 11)

Uncorrected GPS Coordinates: N 48° 27' 24.15" W 118° 13' 14.18"

Corrected GPS Coordinates:

GPS File Name: M060321A

Sampling Method: bowl-spoon

WESTON Sample No: TR-024-SD

Water Depth to Sediment: NA-dry

CLP #s: MTD9FA

Photograph: roll: SWF 1/6 exposure: 15 + 16

EPA Tracking No.: 01234062

Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1346	1"	~~30~~ 40 % gravel 30 % sand 30 % silt <1 % clay Gravel flat, angular ~1/4-1/2", Sand is v. fine to v. coarse Small insects. Some organics. No slag, No odor dry, med. gray.

Notes: photo 15 - sample location
16 - sample

GPS reading taken ~30' east of sample location (on roadway)

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, SD
Date: 6-3-01
Weather: sunny, 60's
Location Description: LA Fleur Creek
Uncorrected GPS Coordinates: N 48° 29' 18.61" W 118° 12' 25.98"
Corrected GPS Coordinates:
GPS File Name: M060322A
Sampling Method: bowl + spoon
WESTON Sample No: TR-088-SD
Water Depth to Sediment: 4"
CLP #s: MJ09G1
Photograph: roll: SMF 6 7 AB exposure: # 17+18
EPA Tracking No.: 01234063
Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1450	2"	0% gravel 10% SAND (v. fine) 80% silt 10% clay Highly organic; v. dark gray brown. Saturated. strong sulfur odor, some insect "shells". No slag. Fine organics, apparently from moss.

Notes: photo 17 - sample
18 - sample area
GPS reading taken ~ 5' west of sample location

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: KB / AB / [illegible]

Date: 6/4/2001

Weather: OVERCAST / LIGHT RAIN [illegible]

Location Description: ROTTOR BAY CREEK

Uncorrected GPS Coordinates: N 46° 20' 51.48" W 118° 11' 17.42"

Corrected GPS Coordinates:

GPS File Name: TU6041BA

Sampling Method: Bowl / Spoon

WESTON Sample No: TRU 02 SD

Water Depth to Sediment: ~1"

CLP #s: MJ09 F7

Photograph: roll: SMF 5 exposure: 23/24

EPA Tracking No.: 01234064

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1200	3"	(0% GRAVEL / 35% FINE SAND / 65% SILT / 0% CLAY), DARK BROWN, NO ODOR OR SLAG, SCATTERED TWIGS, NO OTHER DEBRIS.

Notes:
- PHOTO 23 TAKEN FACING SE
- PHOTO 24 TAKEN FACING W
- SAMPLE LOCATION ~ 1/2 MILE UPSTREAM OF ROTTOR BAY ON ROTTOR BAY RD.

Sampler's Signature: [illegible]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/ATB/SD

Date: 6/6/2001 Weather: OVERCAST ~60°F

Location Description: UNNAMED CREEK T37N R37E SEC 16 SW 1/4

Uncorrected GPS Coordinates: N48° 41' 56.22" W118° 06' 58.88"

Corrected GPS Coordinates:

GPS File Name: T060617A Sampling Method: BOWL/SPOON

WESTON Sample No: TR 113 SD Water Depth to Sediment: DRY TRIB

CLP #s: MJ09F8 Photograph: roll: KB2 exposure: 2/3

EPA Tracking No.: 01234065

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0900	1"	(15% FINE GRAVEL/75% COARSE AND FINE SAND/10% SILT/0% CLAY), BROWN, NO ODOR OR SLAG, OCASSIONAL PINE NEEDLES, NO OTHER DEBRIS.
			used T060616A GPS file for this location SMF

Notes:
- PHOTO 2 TAKEN FACING SE
- PHOTO 3 TAKEN FACING
- ~1/2" OF ORGANIC MATTER (TWIGS, LEAVES) ON TOP OF SEDIMENT.
- SAMPLE COLLECTED ~ 100' DOWN STREAM OF ROADWAY
- GPS FILE T060616A: GATHERED 19 DATA READINGS AT SAMPLE SITE - COULD NOT COLLECT ANY MORE. MOVED TO LOCATION ~50' S OF SAMPLE SITE FOR MORE NEW FILE READING.

Sampler's Signature: KB

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / AB / SD

Date: 10/5/2001 Weather: OVERCAST 60°F

Location Description: DEADMAN CREEK

Uncorrected GPS Coordinates: N 48° 42' 25.94" W 118° 07' 36.07"

Corrected GPS Coordinates: _____

GPS File Name: TO60521A Sampling Method: Bowl / Spoon

WESTON Sample No: TR 114 SD Water Depth to Sediment: 3"

CLP #s: MJ0960 / JX567 Photograph: roll: KB1 exposure: 18/19

EPA Tracking No.: 01234066

Analyses: METAL, PEST/PCB / TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1345	2"	(10% FINE GRAVEL / 90% COARSE to FINE SAND / 0% SILT / 0% CLAY), BROWN, NO ODOR OR SLAG, OCCASIONAL TWIGS, NO OTHER DEBRIS
2	1345	2"	" SM
3	1345	2"	" SM

Notes: • PHOTO 18 TAKEN FACING W
• PHOTO 19 TAKEN FACING E

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: KB / AB / HW

Date: 6/4/2001

Weather: OVERCAST 60°F

Location Description: ~~TR-090-SD~~ Unnamed Sampling Location SMF, 10-25-01

Uncorrected GPS Coordinates: N 48° 30' 36.90" W 118° 09' 06.44"

Corrected GPS Coordinates:

GPS File Name: T060416A

Sampling Method: Bowl / Spoon

WESTON Sample No: TR-090-SD

Water Depth to Sediment: DRY TRIB

CLP #s:

Photograph: roll: SMF 5 exposure: 19, 20

EPA Tracking No.: 1234067

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0930	2-4"	(0% GRAVEL, 100% FINE SAND, 0% SILT, 0% CLAY), GREYISH BROWN, NO ODOR OR SLAG, SCATTERED ROOTS, NO DEBRIS.

Notes:
- PHOTO 19 TAKEN FACING SE
- PHOTO 20 TAKEN FACING NW
- SAMPLE COLLECTED ~ 10' ABOVE FULL POOL ELEVATION.
- SAMPLE COLLECTED ~ 50' UPSTREAM OF FULL POOL
- SLAG MATERIAL PRESENT ON BEACH BELOW TRIB. MOUTH. SLAG IS FINE GRAINED SUB ROUNDED, BLACK. MAGNETIC.
- GPS READING TAKEN ~100' DOWNSTREAM OF SAMPLE LOCATION ON BEACH

Sampler's Signature: [signature]

-18-01 SMF - mistaken location - not a defined tributary location.

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: KB / AR / HW

Date: 6/4/2001 — Weather: Overcast 60°F

Location Description: N48°30' 47.58" W118°08' 54.75"

Uncorrected GPS Coordinates: Unnamed tributary South of Grassburg Campground SMF

Corrected GPS Coordinates:

GPS File Name: T060417A — Sampling Method: Bowl / Spoon

WESTON Sample No: TR-091-SD — Water Depth to Sediment: Dry Trib

CLP #s: MJ09G3 / JX560 — Photograph: roll: SMF 5 exposure: 21, 22

EPA Tracking No.: 01234068

Analyses: Metals, Post/PCB's, TOC's

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1030	2-3"	(10% GRAVEL / 70% FINE SAND / 20% SILT / 0% CLAY), BROWN, NO ODOR OR SLAG, SCATTERED ROOTS, NO OTHER DEBRIS
2	1030		"
3	1050		"

Notes:
- PHOTO 21 TAKEN FACING NE
- PHOTO 22 TAKEN FACING SW
- SAMPLE LOCATION ~ 30' ABOVE FULL POOL ELEVATION
- SAMPLE LOCATION ~ 200' UPSTREAM OF FULL POOL.
-

6-18-01 SMF — Sample location was @ trib #92 - Grassburg Beach campground

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / SD

Date: 6/7/2001 Weather: SCATTERED CLOUDS 65°F

Location Description: UNNAMED, T35N, R37E, SEC 15 (N OF BRADLEY)

Uncorrected GPS Coordinates: N 48° 31' 36.78" W 118° 8' 12.22"

Corrected GPS Coordinates:

GPS File Name: M060719A Sampling Method: Bowl / Spoon

WESTON Sample No: TR-094-SD Water Depth to Sediment: DRY TRIB

CLP #s: MJ0966 Photograph: roll: KB3 exposure: 4/5

EPA Tracking No.: 01234071

Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1200	3"	(0% GRAVEL / 100% FINE SAND / 0% SILT / 0% CLAY), LIGHT BROWN, NO ODOR OR SLAG, NO ORGANICS, NO OTHER DEBRIS

Notes: · PHOTO 4 TAKEN FACING SE
· PHOTO 5 TAKEN FACING SE
· GPS LOCATION ~10' N OF SAMPLE LOCATION

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMW, SD

Date: 6-4-01 — Weather: cloudy, cool (50.)

Location Description: Cougar Canyon Creek

Uncorrected GPS Coordinates: N 48° 33' 33.38" W118° 9' 16.49"

Corrected GPS Coordinates: _____

GPS File Name: M060417A — Sampling Method: bowl + spoon

WESTON Sample No: TR-097-SD — Water Depth to Sediment: N/A - Dry

CLP #s: MJ0967 — Photograph: roll: ~~SMF~~ 7.18 exposure: 19+20

EPA Tracking No.: 01234072

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1015	4"	0 % gravel, 70 % sand 30 % silt ~1 % clay. No odor, med. brown. dry. Sand is predom. coarse to medium grained. Organics from soil horizon incl. woody frags, + rootlets.

Notes: Pine needles/grass debris 1" over organic mat ~1" thick, over organic soil 1-2", over sand layer.
photo 19 - sample location
20 - sample.
Some sfc. metal debris noted @ sampling location discovered during sampling (thin metal bands ~1" wide)

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, SN

Date: 6-4-01

Weather: Clear, 50's

Location Description: Sherman Creek

Uncorrected GPS Coordinates: N 48° 34' 59.10" W 118° 08' 22.08"

Corrected GPS Coordinates:

GPS File Name: MOU0418A

Sampling Method: bowl & spoon

WESTON Sample No: TR-09X-SN

Water Depth to Sediment: 3"

CLP #s: JX562 / MJ096-8

Photograph: roll: SMF 1 exposure: 21, 22 + 23

EPA Tracking No.: 01234073

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1105	1-2"	20 % gravel 80 % sand 0<1 % silt 0 % clay Some organics, and very thin sheen occasionally. Sand is v. fine to v. coarse, angular-subrounded. Gravel primarily as granules, up to ~1cm. Saturated multi-colored grains. No obvious slag, no odor

Notes: Sampler (DS) noted thin film that appeared on water after as he was collecting the sediment..

* MS/MSD

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, SD

Date: 6-4-01 Weather: cloudy, cool (50s)

Location Description: Unnamed tributary west of Mingo Creek

Uncorrected GPS Coordinates: N 48° 34' 21.76" W 118° 04' 53.25"

Corrected GPS Coordinates:

GPS File Name: M0605016/ Sampling Method: bowls spoon

WESTON Sample No: TR-105-SD Water Depth to Sediment: N/A - dry

CLP #s: JX564 / MJ09H0 Photograph: roll: SMF 7 / 90 exposure: 11+12

EPA Tracking No.: 01234075

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1830	4.7"	1 % gravel <5 % sand 90 % silt 5 % clay Moist, Dark brown. Rootlets, no odor, some woody (bark) debris. Gravel as granules ~ 1cm long. Sample has abundant organic debris. Sand is v fine to fine-grained.

Notes: 4" humus material overlying sed. ~1" humus included in sample.

photo 11 - sample area

12 - sample

PDOP <11 on GPS reading written above. Trees overhead; Scott also got a second reading (M0605016) outside a clearing ~50 ft north of sample loc., but PDOP didn't improve (~10).

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF, SD

Date: 6-4-01 — Weather: raining, cool

Location Description: Mulino Creek

Uncorrected GPS Coordinates: N 48° 34' 27.01" W118° 4' 45.79"

Corrected GPS Coordinates: _____

GPS File Name: M060501A — Sampling Method: bowl & spoon

WESTON Sample No: TR-106-SD — Water Depth to Sediment: 0" (@ waterline)

CLP #s: JX565 / MJOBJ1 — Photograph: roll: SMF 8 exposure: 9+10

EPA Tracking No.: 01234076

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1746	1"-1.5" Set over cobbles	<1 % gravel 40 % sand 60 % silt 0 % clay Saturated, med grayish brown. Very slight organic odor. Organic matter incl. rootlets, leaves, & fine organics & woody pieces, twigs.

Notes: photo 9- Sample location
10- Sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF, SD

Date: 6-4-01 — Weather: cloudy, cool 50s

Location Description: Colville River

Uncorrected GPS Coordinates: N 48° 34' 32.45" W 118° 4' 35.00"

Corrected GPS Coordinates: _____

GPS File Name: M060500A — Sampling Method: bowl + spoon

WESTON Sample No: TR-107-SD — Water Depth to Sediment: N/A exposed

CLP #s: JX566 / MJ0BJ2 — Photograph: roll: SMF 8 exposure: 6 + 7 + 8

EPA Tracking No.: 01234077

Analyses: Metals, Pest / PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1715	1-2"	~1 % gravel 15 % sand 40 % silt ~44 % clay strong sewage odor. saturated, very dark gray. Sand mix size is generally med. to coarse, but some grains are very coarse. Organic matter incl. wattles.
			Sample is "sloppy", gelatinous.

Notes: Sample loc. @ waterline. Sediment in layers brown @ sfc, black ½-1" then sandy, overlying small boulders/cobbles.

Photo 6 - sample area

7 - sample

8 - sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, SD
Date: 6-4-01
Weather: rainy, cool (50s)
Location Description: Unnamed ephemeral (T36N, R38E, Section 18, SW Qtr)
Uncorrected GPS Coordinates: N 48° 36' 55.16" W 118° 4' 46.35"
Corrected GPS Coordinates:
GPS File Name: M060421A
Sampling Method: bowl + spoon
WESTON Sample No: TR-108-SD
Water Depth to Sediment: ~1" (@ waterline)
CLP #s: MJOBJ3
Photograph: roll: SMF 7 / SMF 8 exposure: 24 1+2+3+4+5
EPA Tracking No.: 01234078
Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1300	~~1-2" SMF~~ 1	0% gravel 90% SAND ~5% silt ~5% clay med. brown/grayish brown. saturated. no odor. Sand is very fine to fine. Some fine black particulates, but not obvious slag. Black organic particles also.

Notes: SMF ~~6~~ 7 AB #24 - Sample
AB 8 #1 - Sample loc.
AB 8 #2 - shack downstream @ ~40' E. of trib. along edge of floodplain.
photo SMF 8 #4 - poss. "placer" deposit in stream bed, in lake.
photo SMF 8 #5 exposed piping, poss. assoc'd w/ pump house
Shack appeared to contain old pump equipment.
photo SMF 8 #3
(trib is running)
GPS taken ~200' North of sampling point, @ mouth of trib.

Sampler's Signature: [signature]

On sandbar @ mouth of trib w/in lake, noticed "placer" deposits - reddish and black particles. Black particles are glassy; collected some material in a film canister + asked Scott to screen w/ XLF. Similar to deposits observed + screened by Neal on the bank by the tree stems. Neal reported non-similar at KRP results on that material.

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF, HW

Date: 10-5-01 — Weather: cloudy, cool

Location Description: Unnamed Tributary, T32N R37E, section 8

Uncorrected GPS Coordinates: N 48° W118°

Corrected GPS Coordinates:

GPS File Name: M060517A — Sampling Method: ~~Bowl~~ spoon

WESTON Sample No: TR-050-SD — Water Depth to Sediment: N/A DRY

CLP #s: MJ0BJ4 — Photograph: roll: ~~SMF~~ 8 exposure: 13 ~~SMF~~

EPA Tracking No.: 01234079

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1000	2"	0% gravel ~5 % sand 90 % silt ~5 % clay Dry, med brown. Rootlets are common. No slag, no odor.

Notes: Sample pt ~400' up trib valley from current lake level. (1277'). Sample loc. vegetated w/ mature pines Approx. 2' above full pool elevation (at least) Sample pt had ~1" thick layer of pine needles + moss @ sfc. which was cleared away prior to sampling photo 13- sample Sample collected + homogenized in sample jar

Sampler's Signature:

WESTON

MANAGERS DESIGNERS/CONSULTANTS

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, HW

Date: 6-5-01 Weather: Cloudy, 50's

Location Description: Unnamed tiler @ Clover Leaf Beach Campground

Uncorrected GPS Coordinates: N 48° 17' 50.02 W 118° 08' 44.22

Corrected GPS Coordinates: _____

GPS File Name: M0605176 Sampling Method: Spoon

WESTON Sample No: TR-057-SD Water Depth to Sediment: N/A - dry

CLP #s: MJ0BJ5 Photograph: roll: SMF7 exposure: 14-15

EPA Tracking No.: 01234080

Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1045	1/2"	0 % gravel <1 % sand 100 % silt % clay Light brown, dry. Organics (rootlets, woody fragments) ~20% of sample.

Notes: location vegetated w/ wild rose bushes + pine trees, + some deciduous trees (photo 14)
photo 15 - sample.
~1" thick layer of pine needles + moss @ sfc - cleared away prior to sampling. Thin layer, 1/2", of unconsol. sed. atop more compact material, likely not stream deposit.
sample collected + homogenized in sample jar.

Sampler's Signature: [signature]

WESTON
MANAGERS DESIGNERS/CONSULTANTS

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, HW
Date: 6-5-01
Weather: cloudy, cool (50s)
Location Description: Stranger Creek West
Uncorrected GPS Coordinates: N48°17'34.61"
Corrected GPS Coordinates: W118°10'58.47"
GPS File Name: M0605I8A
Sampling Method: bowl + spoon
WESTON Sample No: TR-059-SD
Water Depth to Sediment: 3"
CLP #s: JX570 / MJ0BJ6
Photograph: roll: ~~SMF 7~~ 8 HB exposure: 16, 17+18
EPA Tracking No.: 01234081
Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1145	3"	0 % gravel 30 % sand 70 % silt <1 % clay Saturated, med brown @ sfc, dk gray to black underneath. Organics in sample include rootlets as well as fine organics (abundant), twig fragments, insect casings. Moderate "sewage" smell.
			Sampling activity released bubbles of gas from subsfc. Sand is very fine.

Notes: photo 16 - Mouth of Stranger Creek (W) from Lake.
17 - Sample location (foreground) facing S, after sample collection
18 - sample, facing E, w/ location in foreground

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF, HW

Date: 6-5-01 — Weather: cloudy, 50s

Location Description: Cobbs Creek

Uncorrected GPS Coordinates: N48° 19' 2.10" W118° 11' 18.8"

Corrected GPS Coordinates: _____

GPS File Name: M0605 20 A — Sampling Method: hand spoon

WESTON Sample No: TR-062-SD — Water Depth to Sediment: 1'

CLP #s: MJ0BJ7 — Photograph: roll: SMF-8 exposure: 19+20

EPA Tracking No.: 01234082

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1246	1-2"	0% gravel 60% sand 40% silt <1% clay Saturated. Med. grayish brown No odor. Organics (rootlets + wood frags) ↳ ~10% Sand is v. fine to coarse. No slag.

Notes: Sample was collected + homogenized in jar.
photo 19 - sample location prior to sampling
- (facing W)
20 - sample
Cobbs Cr - very fast-running. Sample loc 75' above MHW line of Lake.
GPS reading collected ~ 10' N - 100' E of sample loc. due to undergrowth + trees. - collected GPS @ tub mouth @ Lake Roosevelt (current - 1277')

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, HW

Date: 6-5-01 Weather: rainy, cool (50s), lt. breeze

Location Description: Unnamed, T33N, R37E, section 30

Uncorrected GPS Coordinates: N48° 19' 59.81" W 118° 11' 26.38'

Corrected GPS Coordinates:

GPS File Name: M060521A Sampling Method: SPOON

WESTON Sample No: TR-064-SD Water Depth to Sediment: N/A - Dry ~~Exposed sm~~

CLP #s: M.TOBJ8 Photograph: roll: SMF8 exposure: 21-22

EPA Tracking No.: 01234083

Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1400	1"	0% gravel 15% SAND 85% SILT 0% CLAY Dry, med grayish brown. Organic debris includes rootlets, & twig & woody (bark) fragments. Organics make up roughly 10% of sample. No odor, no slag. Sand is very fine.

Notes: Sample loc ≥4' above MHW of Lake. (photo 21) (facing E) Sed. sample consisted of ~1" layer of loose material on top of more-consolidated silt deposit. Pines in area show scorching from fire. Loose carpet of pine needles ~1" thick was cleared from sampling pt prior to collection. Sample was collected & homogenized in sample jar.

photo 22 - sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, HW

Date: 6-5-01 Weather: rainy, cool (50s) lt. breeze.

Location Description: Unnamed Trib., T33N R37E, section 19

Uncorrected GPS Coordinates: N 48° 20' 36.21 W 118° 11' 34.46

Corrected GPS Coordinates:

GPS File Name: MOG0522B Sampling Method: Spoon

WESTON Sample No: TR-066 SD Water Depth to Sediment: N/A - DRY

CLP #s: MJ0BJ9 Photograph: roll: SMF-7 exposure: 23-24

EPA Tracking No.: 01234084

Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1445	1-2"	0 % gravel 10 % sand 80 % silt 10 % clay. Dry, grayish brown. Organics (rootlets, wood + bark fragments) make up ~ 20% of sample. No odor, no slag. Sand is very fine.

Notes: Sample location + entire "stream bed" is dry (not running) + overgrown (photo 23 - from sample loc. looking E to Lake)
photo 24 sample was collected + homogenized in jar
Sample loc ~ 3-4' above est. MHW, ~50' upstream.
GPS collected ~210' E of sample location (downstream)

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, HN

Date: 6-6-01 Weather: mostly cloudy, cool (50s)

Location Description: Unnamed Tributary, T34N, R37E, Section 32

Uncorrected GPS Coordinates: N 48° 23' 44.19" W 118° 10' 27.51"

Corrected GPS Coordinates: _____

GPS File Name: M060617A Sampling Method: Spoon

WESTON Sample No: TR-074-SD Water Depth to Sediment: N/A - dry

CLP #s: MJ09F3 Photograph: roll: SMF 8 exposure: 32+33

EPA Tracking No.: 01234085

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1030	2"	20% gravel 65% sand 15% silt 0% clay. Dry, medium grayish brown to dark grayish brown No odor, no slag. Organics, incl. thin woody fragments 1/4" long + rootlets make up ~5% or less of sample material
			Gravel granules up to 1cm long. Sand is predom. v. coarse, but ranges in size from very fine to very coarse.

Notes: Heavy mineral deposits on beach in front of sampling location. Location is overgrown w/ wild roses & cherry trees. Is located near fenceline on grassy field (photo 32), on escarpment ~6' above beach, roughly 10' above current water level. Sample was collected + homogenized in sample jar.

photo 32 - fishing on lake observed travelling from this point to Chemeka Creek (TR-077-SD)

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, HW

Date: 6-6-01

Weather: p sunny, cool (60s), breezy

Location Description: Quillisascut Creek

Uncorrected GPS Coordinates: N 48° 27' 07.05" W 118° 11' 41.93"

Corrected GPS Coordinates:

GPS File Name: M0106 21A

Sampling Method: spoon

WESTON Sample No: TR-083-SD

Water Depth to Sediment: 2-3"

CLP #s: MJ09F8

Photograph: roll: SMF 8 exposure: 8+9

EPA Tracking No.: 012340860

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1.	1415	1.5-2"	0 % gravel ~ 60 % SAND ~ 40 % SILT <1 % clay Saturated, med. brown. Organic debris incl. woody fragments ~ 1/4" long + poss rootlets, make up ~ 5% of sample. Sand is very fine to coarse, primarily fine. No odor, no slag.

Notes: Sample was collected + homogenized in sample jar. Photo 8 - sample loc. prior to sampling (facing E) photo 9 - sample location is 2.5' above MHW

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, HW

Date: 6-6-01

Weather: sunny, warm (70s)

Location Description: Unnamed trib, T34N R37E, section 6

Uncorrected GPS Coordinates: N 48° 28' 04.11 W 118° 11' 36.00"

Corrected GPS Coordinates:

GPS File Name: M0606 22A

Sampling Method: SPOON

WESTON Sample No: TR-085-SD

Water Depth to Sediment: N/A - DRY

CLP #s: M50960

Photograph: roll: SMF 87 exposure: 10 + 11

EPA Tracking No.: 01234087

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1515	0.5" below. 1" covering of grass + leaf debris	0 % gravel 65 % SAND 20 % SILT 15 % clay Dry to moist, med. grayish brown. Organic material, incl. rootlets, leaf debris + minor woody material (bark?) ~ 1/4" wide, makes up ~20% of sample. Sand is medium, fine, but ranges from very fine to medium.

Notes: photo 10 - trib mouth showing MHW level indicators (logs, debris)

Sample location ~ 4' above MHW; sample material was collected + homogenized in sample jar.

photo 11 - sample

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/ AB/ SD

Date: 10/10/2001 Weather: OVERCAST 60°F

Location Description: UNNAMED EPHEMERAL T37N R37E SEC 16 NW 1/4

Uncorrected GPS Coordinates: N48°42'38.88" W118°07'8.71"

Corrected GPS Coordinates:

GPS File Name: TO60617B Sampling Method: BOWL / SPOON

WESTON Sample No: TR115 SD Water Depth to Sediment: DRY TRIB

CLP #s: MJ0BK0 Photograph: roll: KB2 exposure: 4/5

EPA Tracking No.: 01234088

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1030	1"	(10% FINE GRAVEL / 75% COARSE TO FINE SAND / 15% SILT / 0% CLAY), BROWN, NO ODOR OR SLAG, OCCASIONAL TWIGS, NO OTHER DEBRIS

Notes: • PHOTO 4 TAKEN FACING E
• PHOTO 5 TAKEN FACING SW

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/AB/SD

Date: 6/5/2001 Weather: OVERCAST 60°F

Location Description: UNNAMED EPHEMERAL T37N, R37E, SEC 9 ~~NE¼~~ NW¼, SE¼

Uncorrected GPS Coordinates: N 48° 43' 15.12" W 118° 7' 07.59"

Corrected GPS Coordinates:

GPS File Name: TO60522A Sampling Method: BOWL / SPOON

WESTON Sample No: TR116 SD Water Depth to Sediment: DRY TRIB

CLP #s: MJOBK1 Photograph: roll: KB1 exposure: 22/23

EPA Tracking No.: 01234089

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1530	8"	(0% GRAVEL / 90% FINE SAND / 10% SILT / 0% CLAY), DARK BROWN, NO ODOR OR SLAG, OCCASIONAL TWIGS, NO OTHER DEBRIS.

Notes: PHOTO 22 TAKEN FACING E
PHOTO 23 TAKEN FACING W

LB • ~2" - 6" OF ORGANIC MATERIAL
• GPS LOCATION ~10' NORTH OF SAMPLE LOCATION

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: KB/AD/SD

Date: 6/5/2001 — Weather: OVERCAST 55°F

Location Description: UNNAMED EPHEMERAL; T37N, R37E, Sec 9, NW1/4, NE1/4

Uncorrected GPS Coordinates: N 48° 43' 25.40" W 118° 7' 7.78"

Corrected GPS Coordinates: _____

GPS File Name: T060523A — Sampling Method: BOWL/SPOON

WESTON Sample No: TR 117 SD — Water Depth to Sediment: DRY TRIB

CLP #s: MJOBK2 — Photograph: roll: KB1/KB2 exposure: 24/1

EPA Tracking No.: 01234090

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1600	~2"	(0% GRAVEL / 85% MEDIUM TO FINE SAND / 15% SILT / 0% CLAY), BROWN, NO ODOR OR STAINING SLAG, OCCASIONAL TWIGS, NO OTHER DEBRIS.

Notes: · PHOTO KB1-24 TAKEN FACING W
· PHOTO KB2-1 TAKEN FACING
· GPS LOCATION ~120' DOWNSTREAM (W) OF SAMPLE LOCATION

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / AB / SD

Date: 10/5/2001 Weather: OVERCAST 60°F

Location Description: UNNAMED EPHEMERAL, T37N. R30E SEC 4 NE ¼

Uncorrected GPS Coordinates: N 48° 44' 14.03" W 119° 07' 01.96"

Corrected GPS Coordinates:

GPS File Name: TD60521B Sampling Method: BOWL / SPOON

WESTON Sample No: TR 118 SD Water Depth to Sediment: DRY TRIB

CLP #s: MJOBK3 / JX568 Photograph: roll: KB 1 exposure: 20/21

EPA Tracking No.: 01234091

Analyses: METALS / PCB / PEST / TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1430	3"	(10% FINE GRAVEL / 90% COARSE TO FINE SAND / 0% SILT / 0% CLAY), BROWN, NO ODOR, SLIGHTLY MAGNETIC POSSIBLY SLAG, OCCASSIONAL TWIGS, NO OTHER DEBRIS.
2	1430	"	" SAME
3	1430	"	" SAME

Notes:
- PHOTO 20 TAKEN FACING W
- PHOTO 21 TAKEN FACING
- ~1/2" OF ORGANIC DEBRIS (PINE NEEDLES) ONTOP OF SAMPLE LOCATION

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / AB / SD

Date: 6/5/2001 Weather: OVERCAST 60°F

Location Description: UNNAMED TRIB TO KETTLE RIVER ARM DRAINING POND NEAR BO

Uncorrected GPS Coordinates: N 48° 43' 02.59" W 118° 07' 43.77"

Corrected GPS Coordinates: _____

GPS File Name: T060520A Sampling Method: BOWL / SPOON

WESTON Sample No: TR 119 SD Water Depth to Sediment: DRY TRIB

CLP #s: MJ0BK4 Photograph: roll: KB 1 exposure: 16/17

EPA Tracking No.: 01234092

Analyses: METAL

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1320		(5% FINE GRAVEL / 95% MEDIUM SAND / 0% SILT / 0% CLAY), LIGHT BROWN, NO ODOR OR SLAG, SCATTERED ROOTS AND TWIGS, NO OTHER DEBRIS.

Notes: PHOTO 16 TAKEN FACING W
PHOTO 17 TAKEN FACING W

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: KB/ AB/ SD
Date: 6/5/2007
Weather: OVERCAST 60°F
Location Description: MATSEN CREEK
Uncorrected GPS Coordinates: N48° 44' 18.57" W118° 7' 54.30"
Corrected GPS Coordinates:
GPS File Name: T0605181B
Sampling Method: Bowl/Spoon
WESTON Sample No: TP. 120 SD
Water Depth to Sediment: 1"
CLP #s: MJ0BK5
Photograph: roll: KB1 exposure: 14/15
EPA Tracking No.: 1234093
Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1145	3"	(0% GRAVEL/ 100% FINE-MEDIUM SAND/ 0% SILT/ 0% CLAY), BROWN, NO ODOR OR SLAG, OCCASIONAL ORGANICS, NO OTHER DEBRIS

Notes:
- PHOTO 14 TAKEN FACING SE.
- PHOTO 15 TAKEN FACING SE
-

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: KB/AB/JD

Date: 6/5/2001

Weather: SCATTERED CLOUDS 60°F

Location Description: DOYLE CREEK

Uncorrected GPS Coordinates: N 48° 44' 27.53" W118° 0' 56.10"

Corrected GPS Coordinates:

GPS File Name: T060518A

Sampling Method: BOWL / SPOON

WESTON Sample No.: TR 121 SD

Water Depth to Sediment: 1/2" - 1"

CLP #s: MJ 08K6

Photograph: roll: KB1 exposure: 12/13

EPA Tracking No.: 01234094

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1100	4"-5"	(15% FINE GRAVEL / 75% FINE AND COARSE SAND / 10% SILT / 0% CLAY), GREYISH BROWN; NO ODOR OR SLAG, NO ORGANICS, NO OTHER DEBRIS.

Notes:
- PHOTO 12 TAKEN FACING SE
- PHOTO 13 TAKEN FACING SW
- GPS LOCATION ~ 30' NORTH OF SAMPLE LOCATION.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/AB/SD

Date: 6/5/2001 Weather: SCATTERED CLOUDS 65°F

Location Description: KETTLE RIVER

Uncorrected GPS Coordinates: N 48° 44' 53.11" W 118° 7' 23.35"

Corrected GPS Coordinates:

GPS File Name: T0605 17A Sampling Method: BOWL / SPOON

WESTON Sample No: TR 122 SD Water Depth to Sediment: ~ 1"

CLP #s: MJ0BK7 / JX569 Photograph: roll: KB1 exposure: 10/11

EPA Tracking No.: 01234095

Analyses: METALS / PEST/PCB / TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	945	2"	(0% GRAVEL / 100% FINE TO MEDIUM SAND / 0% SILT / 0% CLAY), LIGHT BROWN, NO ODOR, FINE GRAINED BLACK MAGNETIC MATERIAL - POSSIBLE SLAG, OCCASIONAL TWIGS, NO OTHER DEBR
~~2~~	~~945~~	~~2"~~	~~" SMF~~
~~3~~	~~945~~	~~2"~~	~~" SMF~~

Notes:
- PHOTO 10 TAKEN FACING E
- PHOTO 11 TAKEN FACING SE
-

3m Zn - 58.0

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, HW

Date: 6-5-01 Weather: rainy, cool (50's)

Location Description: Unnamed Tributary (T33N, R36E, section 1)

Uncorrected GPS Coordinates: N48° 23' 10.94" W118° 11' 57.62"

Corrected GPS Coordinates:

GPS File Name: M060522C Sampling Method: Spoon

WESTON Sample No: TR-071-SD Water Depth to Sediment: N/A - Dry

CLP #s: MJOB K8 Photograph: roll: SMF 7/8 exposure: 25+26+27

EPA Tracking No.: 01234096

Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1545	1"	0% gravel ~50 % sand ~50 % silt <1 % clay Dry. med grayish brown. Organics incl rootlets & grass detritus comprises ~ 10% of sample. Sand is v fine to coarse. No odor, no slag

Notes: Sample pt ~ 10' above MHW. Area is grassy.
photo 25 - creek mouth (looking W)
26 - view from sampling pt (looking SE to lake)
27 - sample
sample was collected & homogenized in jar.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SMF, HW

Date: 10-5-01

Weather: Rainy, cool, light breeze (50's)

Location Description: Unnamed trib, T33N R37E, section 4

Uncorrected GPS Coordinates: N48° 23' 23.55" W 118° 10' 15.97"

Corrected GPS Coordinates:

GPS File Name: M060523A

Sampling Method: spoon

WESTON Sample No: TR-072-SA

Water Depth to Sediment: N/A - dry

CLP #s: MJOBK9

Photograph: roll: SMF 8 MB exposure: ~~28~~, 28, 29

EPA Tracking No.: 01234097

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1630	1"	0 % gravel 20 % sand 80 % silt % clay dry, light grayish brown. Organics, incl. rootlets + woody twig fragments (½" or less) make up ~ 10% of material. Sand is very fine. No odor, no slag

Notes: Used GPS to confirm location on map of trib mouth. Trib is dry, vegetated. (photo 28)
HW marks sampling loc in photo 28, which was taken from MHW line, roughly 8' below sampling point.
photo 28 - sample. Sample collected + homogenized in jar. GPS Reading taken ~ 20' W. of sample pt.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, HW
Date: 6-6-01
Weather: cloudy, breezy, 50s
Location Description: Unnamed tributary, T33N, R37E, SECTION 5
Uncorrected GPS Coordinates: N48° 23' 34.8" W118° 10' 20.01"
Corrected GPS Coordinates:
GPS File Name: M06D616B
Sampling Method: SPOON
WESTON Sample No: TR-073-SD
Water Depth to Sediment: N/A - dry
CLP #s: MJ0BL0
Photograph: roll: ~~SMF 7~~ 8 AB exposure: 30 + 31
EPA Tracking No.: 01234098
Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0945	1"	0 % gravel 10 % sand 80 % silt 10 % clay Dry, med. grayish brown. Organic debris, incl. twig fragments + rootlets, makes up ~ 10% of sample. No odor, no slag. Sand is very fine

Notes: Sample loc (photo 30, facing E) is faint drainage trace exiting a grassy field. Sample pt ~ 10' above beach, on escarpment.
Sample collected + homogenized in sample jar.
GPS file M06D616A is base file opened accidentally photo 31 - sample.
Heavy mineral 'placer' deposits noted on beach @ this site (incl slag?)

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF

Date: 6-16-01 — Weather: cloudy, light breeze, 50s

Location Description: Chemeketa Creek

Uncorrected GPS Coordinates: N 48° 25' 06.16" W 118° 10' 50.04"

Corrected GPS Coordinates:

GPS File Name: M060618A — Sampling Method: bowl & spoon

WESTON Sample No: TR-077-SD — Water Depth to Sediment: 1"

CLP #s: MJ0BL1 / JX571 — Photograph: roll: ~~SMF 7~~ 8 exposure: 36 + 37

EPA Tracking No.: 01234099

Analyses: Metals, Pest / PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1100	1-2"	0 % gravel 60 % sand 30 % silt 10 % clay Saturated. Med-DK reddish brown. some rootlets. Sand is very fine to medium. No odor. no slag observed.

Notes: photo 35 - second boat of fishermen observed on way to Chemeketa Creek from south. photo faces SE.
photo 36 - sample loc, looking E
37 - sample
Sample pt ~10' above MHW
* MS / MSD
Chemeketa Creek flowing @ ~0.5 ft/sec.

* GPS reading collected ~130' downstream of sample pt. @ lake shoreline.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SMF, HW

Date: 6-6-01 — Weather: Sunny, warm (60s), breezy

Location Description: Unnamed Tributary, North of Chewuch Creek.

Uncorrected GPS Coordinates: N 48° 25' 08.74" W 118° 10' 52.10"

Corrected GPS Coordinates: _____

GPS File Name: M060601 9A — Sampling Method: Spoon

WESTON Sample No: TR-078-SD — Water Depth to Sediment: 1"

CLP #s: MJ0BL2 — Photograph: roll: SMF 8 exposure: 1+2+3

EPA Tracking No.: 01234100

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1245	1" deep water 1-1.5" bgs	0% gravel ~10 % sand 90 % silt <1 % CLAY Saturated. Med grayish brown. Organics incl. poss rootlets + leaf debris and fine organic particles. The organic particles are abundant. No odor, no slag
			sand is fine to very fine. Some larger particles of semi-consolidated silt

Notes: Collected + homogenized sample material in jar.
photo 1 - sample loc.
2 - sample loc. taken from approxmat MHW line; sample loc. is behind overgrowth in center of photo, ~2' above backpack shown. ~5' above MHW
GPS location recorded ~6' West of sample loc.
Sample shown in photo 3.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, HW

Date: 6-6-01 Weather: Sunny, Cool, breezy (60°s)

Location Description: Unnamed trib, T34N, R37E, S29, NW 1/4

Uncorrected GPS Coordinates: N 48° 25' 22.53" W 118° 10' 57.10"

Corrected GPS Coordinates:

GPS File Name: M060619B SMF Sampling Method: Spoon

WESTON Sample No: TR-079-SD Water Depth to Sediment: dry

CLP #s: MJOBL ~~2~~ SMF 3 Photograph: roll: ~~SMF 8~~ SMF 9 exposure: 4, 5

EPA Tracking No.: 01234101

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1300	2-3"	<1% gravel 30% SAND 65% SILT <5% clay (Minor granules) Dry lt brownish gray. Organics incl. rootlets + woody fragments make up ~5% of sample.
			Sand is very fine-grained. No odor, no slag

Notes: Sample collected + homogenized in sample jar
photo 4- sample area - narrow creek bed (dry)
5- sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: SWF, HW

Date: 6-6-01

Weather: m-cloudy, cool (60's), breezy

Location Description: Unnamed trib, T34N, R.37E, SECTION 20

Uncorrected GPS Coordinates: N 48° 25' 50.05" W 118° 11' 13.86"

Corrected GPS Coordinates:

GPS File Name: M0060620A

Sampling Method: Spoon

WESTON Sample No: TR 080 SD

Water Depth to Sediment: N/A - dry

CLP #s: M JOB24

Photograph: roll: SWF 8 exposure: 6 & 7

EPA Tracking No.: 01234 SWF 102

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1330	5" bgs	0 % gravel 65 % sand 35 % silt 0 % clay Dry, lt. grayish brown. Organic debris incl. bark fragments, rootlets, twig fragments ~ 1" long comprises 40% or more of the sample as a whole. Sand ranges from v. fine to very coarse.

Notes: Sample was collected + homogenized in jar.
photo 6 - sample location - dry creek trace ~4' above MHW line, facing E
photo 7 - sample
Sfc incl layer of pine needles + cones ~2-3" thick. Sample collected to ~3" below the sfc debris

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, HW
Date: 6-6-01
Weather: mostly cloudy, cool, breezy (60°s)
Location Description: Cuba Canyon Creek
Uncorrected GPS Coordinates: N 48° 28' 44.98" W 118° 12' 28.68"
Corrected GPS Coordinates:
GPS File Name: M060622B
Sampling Method: bowl + spoon
WESTON Sample No: TR-086-SD
Water Depth to Sediment: N/A - dry creek
CLP #s: MJ0B25/JX572
Photograph: roll: SMF, 89 SMF exposure: 12+13
EPA Tracking No.: 01234103
Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1600	8"	0 % gravel 100 % sand 0 % silt 0 % clay Highly organic, largely mossy + other plant debris, like peat moss in appearance. Dry, med-dark grayish brown. Soil odor. no slag. Sand (fine to very fine) is only grainsize observed. Sample material overlies cobbles several inches wide.

Notes: Cleared away ~6" of plant debris (pine needles, cones, bark) prior to collecting sample beneath this layer.
photo 12 sample area
13 sample } facing West.
very low density sample material.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / SD

Date: 6/7/2001 Weather: SCATTERED CLOUDS 70°F

Location Description: UNNAMED, T 31N, R 37E, SEC 15 SW¼ WESTERN TRIB

Uncorrected GPS Coordinates: N 48° 31' 48.31" W 118° 8' 01.22"

Corrected GPS Coordinates: _____

GPS File Name: M0600722A Sampling Method: BOWL / SPOON

WESTON Sample No: TR-101-SD Water Depth to Sediment: DRY TRIB

CLP #s: MJOBL6 Photograph: roll: KB3 exposure: 12/13

EPA Tracking No.: 01234104

Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1500	4"	(0% GRAVEL / 100% COARSE SAND / 0% SILT / 0% CLAY). BROWN, NO ODOR OR SLAG, SCATTERED ROOTS, NO OTHER DEBRIS, ~3" DOWN A DARK BROWN
			SOIL LAYER WAS ENCOUNTERED. (~~60%~~ 70% FINE SAND / ~~40%~~ 30% SILT). KB

Notes: PHOTO 12 TAKEN FACING NE
PHOTO 13 TAKEN FACING NE

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/ AB/ SD

Date: 6/6/2001 Weather: SCATTERED CLOUDS 60°F

Location Description: Hawam Creek

Uncorrected GPS Coordinates: N 49° 33' 30.71" W 118° 07' 25.39"

Corrected GPS Coordinates:

GPS File Name: T0606 22A Sampling Method: Bowl/ spoon

WESTON Sample No: TR 104 SD Water Depth to Sediment: Dry TRIB

CLP #s: MTORL8/ JX573 Photograph: roll: KB2 exposure: 13/14

EPA Tracking No.: 0123 4106 SMF

Analyses: METAL, TOC, PEST/ PCB

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1500	3-4"	0% GRAVEL/ 90% FINE SAND/ 10% SILT/ 0% CLAY, LIGHT BROWN, NO ODOR OR SLAG, OCCASIONAL ROOTS AND WOODY DEBRIS.
~~2~~	~~1500~~	~~"~~	~~" SMF~~
~~3~~	~~1500~~	~~"~~	~~" SMF~~

Notes: • PHOTO 13 TAKEN FACING S
• PHOTO 14 TAKEN FACING N

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/ AB/ SD

Date: 6/10/2001 Weather: OVERCAST 60°F

Location Description: MARTIN SPRING CREEK EPHEMERAL

Uncorrected GPS Coordinates: N 48° 37' 53.89" W118° 04' 41.94"

Corrected GPS Coordinates: _____

GPS File Name: T060700A Sampling Method: PEBWL / SPOON

WESTON Sample No: TR 109 SD Water Depth to Sediment: DRY TRIB

CLP #s: MJ0BL9 / JX574 Photograph: roll: KB 2 exposure: 17/18

EPA Tracking No.: 01234107

Analyses: METALS, TOC, PEST / PCB

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1645	1-1½"	(0% GRAVEL / 80% FINE SAND / 20% SILT / 0% ~~SILT~~ CLAY) LIGHT BROWN, NO ODOR OR SLAG, SCATTERED ROOTS AND WOOD DEBRIS.
~~2~~	1645	"	" SAME
~~3~~	1645	"	" SAME

Notes: PHOTO 17 TAKEN FACING E
PHOTO 18 TAKEN FACING E
GPS LOCATION ~30' W AND ~10' S OF SAMPLE LOCATION

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/AB/SD

Date: 6/6/2001 Weather: OVERCAST 65°F

Location Description: PINKSTON CREEK

Uncorrected GPS Coordinates: N 48° 39' 07.92" W 118° 04' 57.63"

Corrected GPS Coordinates:

GPS File Name: T060622B Sampling Method: BOWL / SPOON

WESTON Sample No: TR 110 SD Water Depth to Sediment: 4"

CLP #s: MJ0BM0 / JX791 Photograph: roll: KB2 exposure: 15/16

EPA Tracking No.: 01234108

Analyses: METAL, TOC, PEST/PCB

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1600	2-3"	0% GRAVEL / 80% COARSE TO FINE SAND / 20% SILT / 0% CLAY), GREYISH BROWN / NO ODOR OR SLAG, SCATTERED WOODY DEBRIS.
2	1600	"	" SAME
3	1600	"	" SAME

Notes: PHOTO 15 TAKEN FACING E

PHOTO 16 TAKEN FACING N.

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/AB/SD

Date: 6/6/2001 Weather: OVERCAST ~60°F

Location Description: NANCY CREEK

Uncorrected GPS Coordinates: N48° 39' 19.63" W118° 06' 50.34"

Corrected GPS Coordinates:

GPS File Name: T060621A Sampling Method: Bowl / SPOON

WESTON Sample No: TR ~~101~~ SD KB Water Depth to Sediment: 2"

CLP #s: MJOBM1 Photograph: roll: KB 2 exposure: 11/12

EPA Tracking No.: 01234109

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1400	4"	(0% GRAVEL / 100% MEDIUM TO FINE SAND / 0% SILT / 0% CLAY), GREYISH BROWN, NO ODOR OR SLAG, OCCASIONAL WOODY TWIGS, NO OTHER DEBRIS.

Notes:
- PHOTO 11 TAKEN FACING W
- PHOTO 12 TAKEN FACING SW
- GPS LOCATION ~5' W OF SAMPLE LOCATION.

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00

Sampling Personnel: KB / AB / SD

Date: 6/6/2001

Weather: OVERCAST 100°F

Location Description: UNNAMED EPHEMERAL STREAM (DOWNSTREAM OF MARCUS ISLAND) T 37N, R 37E, SEC 22

Uncorrected GPS Coordinates: N 48° 41' 25.39" W118° 05' 21.65"

Corrected GPS Coordinates:

GPS File Name: TO 060619A

Sampling Method: BOWL / SPOON

WESTON Sample No: TR 123 SD

Water Depth to Sediment: DRY TRIB

CLP #s: MJOBM2

Photograph: roll: KB2 exposure: 8/9/10

EPA Tracking No.: 01234110

Analyses: METAL

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1245	3"	(5% FINE GRAVEL / 90% COARSE TO FINE SAND / 5% SILT / 0% CLAY). DARK BROWN, NO ODOR OR SLAG, OCCASIONAL WOODY TWIGS MATERIAL, NO OTHER DEBRIS, VEGETATION COVERING SAMPLE AREA.

Notes:
- PHOTO 8 TAKEN FACING SD PLUS PHOTO (ACCIDENTAL)
- PHOTO 9 TAKEN FACING NE
- GPS LOCATION ~ 10' SOUTH OF SAMPLE LOCATION
- PHOTO 10 TAKEN FACING NE

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: KB/AB/SD
Date: 6/6/2001
Weather: ~~0~~ SCATTERED CLOUDS 60°F
Location Description: UNNAMED ACROSS FROM MARCUS ISLAND BEGINS IN MIDDLE O
Uncorrected GPS Coordinates: N 48° 41' 11.42" W118°04'34.59" T37N R37E SEC 23
Corrected GPS Coordinates:
GPS File Name: T060618A
Sampling Method: BOWL/SPOON
WESTON Sample No: TR 124 SD
Water Depth to Sediment: 1"
CLP #s: MJOBM3
Photograph: roll: KB 2 exposure: 6/7
EPA Tracking No.: 01234111
Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay) Color, Odor, Slag, Organics, Debris, Etc.]
1	1130	6-7"	0% GRAVEL/~~100~~ 90% MEDIUM-FINE SAND/0% SILT/10% CLAY), DARK BROWN, NO ODOR OR SLAG, FREQUENT WOOD AND CHARCOAL FRAGMENTS, NO OTHER DEBRIS

Notes:
- PHOTO 6 TAKEN FACING SW
- PHOTO 7 TAKEN FACING N
- TRIB RUNS THROUGH COW FREE LANGE AREA - COWS FREQUENT ~~STREA~~ TRIB.
- MORE SILTY LAYER ~6" DOWN
- GPS LOCATION ~ 50' NORTH OF SAMPLE LOCATION.

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/SD

Date: 6/7/2001 Weather: SCATTERED CLOUDS 65°F

Location Description: UNNAMED, T 35N, R 37E, SEC. 31 DRAINING STACHLY MT

Uncorrected GPS Coordinates: N 49° 29' 04.106" W 118° 12' 34.59"

Corrected GPS Coordinates:

GPS File Name: M0607110A Sampling Method: BOWL / SPOON

WESTON Sample No: TR 087 SD Water Depth to Sediment: DRY TRIB

CLP #s: MJ0BM4 Photograph: roll: KB2 exposure: 19/20

EPA Tracking No.: 01234112

Analyses: METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0915	~~2"~~ 2"	(5% FINE GRAVEL / 80% MEDIUM TO FINE SAND / 15% SILT / ~~TR~~ 0% CLAY), DARK BROWN, NO ODOR OR SLAG, OCC ASSORTED WOODY DEBRIS.

Notes: PHOTO 19 TAKEN FACING E
PHOTO 20 TAKEN FACING N

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/SD

Date: 6/7/2001 Weather: SCATTERED CLOUDS ~65°F

Location Description: UNNAMED, T 31N, R 37E, SEC. 32

Uncorrected GPS Coordinates: N 48° 29' 09.42" W 118° 10' 10.57"

Corrected GPS Coordinates:

GPS File Name: M060717A Sampling Method: BOWL / SPOON

WESTON Sample No: TR 089 SD Water Depth to Sediment: DRY TRIB

CLP #s: MJ0B M5 Photograph: roll: KB2 exposure: 21/22

EPA Tracking No.: 01234113

Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1000	3"	(0% GRAVEL/100% MEDIUM SAND/0% SILT/0% CLAY), LIGHT BROWN, NO ODOR OR SLAG, NO ORGANICS, NO OTHER DEBRIS

Notes:
- PHOTO 21 TAKEN FACING S
- PHOTO 22 TAKEN FACING W
- GPS LOCATION ~ 30' W OF SAMPLE LOCATION

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/ SD

Date: 6/7/2001 Weather: SCATTERED CLOUDS ~65°F

Location Description: MARTIN CREEK

Uncorrected GPS Coordinates: N 48° 31' 15.82" W118° 11' 03.60"

Corrected GPS Coordinates: _____

GPS File Name: M060718A Sampling Method: BOWL/ SPOON

WESTON Sample No: TR 093 SD Water Depth to Sediment: 1-3"

CLP #s: MJOBM6 Photograph: roll: KB 2 exposure: 23/24
KB 3 1

EPA Tracking No.: 01234114

Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1030	1-2"	(5% FINE GRAVEL / 95% MEDIUM TO FINE SAND / 0% SILT / 0% CLAY), LIGHT BROWN, NO ODOR OR SLAG, NO ORGANICS OR OTHER DEBRIS.

Notes:
- PHOTO 23 TAKEN FACING E
- PHOTO 24 TAKEN FACING NW
- PHOTO KB 3 1 TAKEN FACING NW
- GPS LOCATION ~ 200' E OF SAMPLE LOCATION

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/SD

Date: 6/7/2001 Weather: SCATTERED CLOUDS 7°F

Location Description: ROPER CREEK

Uncorrected GPS Coordinates: N 48° 32' 26.56" W 118° 10' 14.49"

Corrected GPS Coordinates:

GPS File Name: M0607103 Sampling Method: Bowl / Spoon

WESTON Sample No: TR-095-SD Water Depth to Sediment: 2"

CLP #s: MJ0BM7 Photograph: roll: KB3 exposure: 2/3

EPA Tracking No.: 01234115

Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1130	1-2"	(0% GRAVEL / 60% MEDIUM SAND / 40% SILT / 0% CLAY), BROWN, NO ODOR OR SLAG, NO ORGANICS, NO OTHER DEBRIS

Notes: PHOTO 2 TAKEN FACING S
PHOTO 3 TAKEN FACING S

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: CB / SD
Date: 6/7/2001
Weather: SCATTERED CLOUDS 70°F
Location Description: PICKEY CREEK
Uncorrected GPS Coordinates: N 48° 32' 23.42" W 118° 08' 09.62"
Corrected GPS Coordinates:
GPS File Name: M0600720A
Sampling Method: BOWL / SPOON
WESTON Sample No: TR-096-SD
Water Depth to Sediment: 1"
CLP #s: MJ0BM8
Photograph: roll: KB3 exposure: 6/7
EPA Tracking No.: 01234116
Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1300	1"	(0% GRAVEL / 50% FINE SAND / 50% SILT / 0% CLAY), DARK BROWN, NO ODOR OR SLAG, NO ORGANICS OR OTHER DEBRIS

Notes: PHOTO 6 TAKEN FACING E
PHOTO 7 TAKEN FACING SW

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/SD

Date: 6/7/2001 Weather: SCATTERED CLOUDS 70°F

Location Description: (UNNAMED), T 36N, R 37E, SEC 22 SE 1/4

Uncorrected GPS Coordinates: N48° 36' 02.37" W118° 08' 10.85"

Corrected GPS Coordinates:

GPS File Name: M0608 00A Sampling Method: BOWL / SPOON

WESTON Sample No: TR-099-SD Water Depth to Sediment: DRY TRIB

CLP #s: MJ0BM9 Photograph: roll: KB 3 exposure: 16/17

EPA Tracking No.: 0123417

Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1645	2"	(0% GRAVEL / 100% COARSE TO FINE SAND / 0% SILT / 0% CLAY), BROWN, NO ODOR OR SLAG, SCATTERED ROOTS, NO OTHER DEBRIS

Notes: PHOTO 16 TAKEN FACING SE
PHOTO 17 TAKEN FACING W
GPS LOCATION ~65' E OF SAMPLE LOCATION

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / SD

Date: 6/7/2007 Weather: SUNNY 70°F

Location Description: UNNAMED, T 31 N, R 37 E, SEC 22 NE 1/4

Uncorrected GPS Coordinates: N 49° 36' 20.83" W 118° 8' 4.27"

Corrected GPS Coordinates:

GPS File Name: M0060722B Sampling Method: BOWL / SPOON

WESTON Sample No: TL-100-SD Water Depth to Sediment: DRY TRUB

CLP #s: MJ0BN0 Photograph: roll: KB 3 exposure: 14/15

EPA Tracking No.: 01234118

Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1600	3"	(0% GRAVEL / 70% MEDIUM TO FINE SAND / 30% SILT / 0% CLAY), DARK BROWN, NO ODOR OR SLAG, OCCASSIONAL ROOTS / PINE NEEDLES, NO OTHER DEBRIS

Notes: PHOTO 14 TAKEN FACING W
PHOTO 15 TAKEN FACING S

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / SD

Date: 6/7/2001 Weather: SUNNY ~70°F

Location Description: UNNAMED T36N, R37E, SEC 15 SE 1/4 EASTERN TRIB

Uncorrected GPS Coordinates: N48° 36' 48.11" W118° 7' 58.48"

Corrected GPS Coordinates: _____

GPS File Name: M0607 21C Sampling Method: BORE / SPOON

WESTON Sample No: TR 102 SD Water Depth to Sediment: DRY TRIB

CLP #s: MJ0BN1 Photograph: roll: KB3 exposure: 10/11

EPA Tracking No.: 01234119

Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1430	2"	(0% / 85% MEDIUM TO FINE SAND / 15% SILT / 0% CLAY), BROWN, NO ODOR OR SLAG, NO ORGANICS OR OTHER DEBRIS

Notes: PHOTO 10 TAKEN FACING SE
PHOTO 11 TAKEN FACING E
INCREASED PROP TO 7.

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Date: 6/7/2001
Location Description: UNNAMED, T30N, R37E, SEC 14 SW 1/4
Uncorrected GPS Coordinates: N 48° 37' 09.18" W 118° 7' 44.16"
Corrected GPS Coordinates: ~~M0600721B~~
GPS File Name: ~~M0600720B~~
WESTON Sample No: TR103-SD
CLP #s: MJOBN2
EPA Tracking No.: 01234120
Analyses: TAL METAL

Sampling Personnel: KB / SD
Weather: CLEAR 70°F
Sampling Method: Bowl / Spoon
Water Depth to Sediment: DRY TUB
Photograph: roll: KB3 exposure: 8/9

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1400	2"	(0% GRAVEL / 100% COARSE TO FINE SAND / 0% SILT / 0% CLAY), LIGHT BROWN, NO ODOR OR SLAG, NO ORGANICS OR OTHER DEBRIS

Notes: · PHOTO 8 TAKEN FACING N
· PHOTO 9 TAKEN FACING E
· GPS FILE M0600720B NOT USED - NO MARK DATA POINTS. HAD TO INCREASE PDOP TO 10
· RPS LOCATION ~ 200' DOWN STREAM ~~AND~~
· GPS FILE M0600721A NOT USED.

Sampler's Signature: KB

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 — Sampling Personnel: SAS, KB

Date: 6-9-01 — Weather: cloudy, breezy, warm

Location Description: TRIBUTARY #112, UNNAMED CREEK, T37N, R37E, S33

Uncorrected GPS Coordinates: N 48° 40' 07.67" W 118° 61' 55.99"

Corrected GPS Coordinates: _____

GPS File Name: M0609 23A — Sampling Method: Spoon

WESTON Sample No: TR-112-SD — Water Depth to Sediment: N/A dry

CLP #s: M5OB51 — Photograph: roll: KB4 exposure: 10+11

EPA Tracking No.: 01234121

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1645	5"	10 % gravel 70 % sand 10 % silt 10 % clay Mod. Dark brownish gray. Slight sulfur odor. Gravel is angular pebble. Organics include small amt of shell. Sand ranges from v. fine to coarse, predominantly fine. No clay

Notes: Sample - collected a homogenized thoroughly in jar
photo 10 - sample, facing S
11 - sample loc, facing S

Sampler's Signature: [signature]

WESTON

MANAGERS DESIGNERS/CONSULTANTS

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB

Date: 6/8/2001 Weather: SUNNY 70°F

Location Description: DEEP CREEK

Uncorrected GPS Coordinates: N48° 55' 56.16" W117°45' 13.38"

Corrected GPS Coordinates:

GPS File Name: M0100817A 047 Sampling Method: BOWL / SPOON

WESTON Sample No: TR-049-SD Water Depth to Sediment: 5"

CLP #s: JX802 / MJ0BK2 Photograph: roll: KB#3 exposure: 18/19

EPA Tracking No.: 01234122

Analyses: TAL METAL / PEST / PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1000	4"	(5% FINE GRAVEL / 15% ~~COARSE~~ MEDIUM SAND, ~~40%~~ 80% FINE SAND / 0% SILT / 0% CLAY), LIGHT BROWN, NO ODOR OR SLAG, OCCASIONAL ROOTS, NO OTHER DEBRIS.
2	1000	4"	" SNF
3	1000	4"	" SNF

Notes: PHOTO 18 TAKEN FACING EAST
PHOTO 19 TAKEN FACING SW

6-9-01 SNF Sample renamed TR-047-SD

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB

Date: 6/8/2001 Weather: SCATTERED CLOUDS W/ RAIN 65°F

Location Description: UNNAMED EPHEMERAL (MINE TRIB #1) T37N, R38E SEC 20 NEW 10/31/01

Uncorrected GPS Coordinates: N 48° 40' 26.80" W 118° 01' 57.71"

Corrected GPS Coordinates: _____

GPS File Name: M060900A 126 Sampling Method: BOWL / SPOON

WESTON Sample No: TR-037-SD Water Depth to Sediment: DRY TRIB

CLP #s: JX803 / MJ0BK3 Photograph: roll: KB#3 / KB#4 exposure: 24/25 / 1

EPA Tracking No.: 01234123

Analyses: TAL METALS, PEST / PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1615	4"	(2% FINE GRAVEL / 10% COARSE SAND, 20% MEDIUM SAND, 68% FINE SAND / 0% SILT / 0% CLAY), ~~LIT~~ GREY, NO ODOR
2	1615	"	OR SLAG, FREQUENT PINE NEEDLES, NO OTHER DEBRIS. "
3	1615	"	"

SMF

SMF

Notes: PHOTO 24 TAKEN FACING NE
PHOTO 25 TAKEN FACING NE - no photo produced
PHOTO KB#4, TAKEN FACING NE
- INCREASED PDOP TO 12 FOR GPS READING
- GPS LOCATION ~ 20' NE NW

6-9-01 SMF - Sample renamed TR-126-SD
10-25-01 T37N, R38E, Section 29, SW 1/4 SMF

Sampler's Signature:

WESTON
MANAGERS DESIGNERS/CONSULTANTS

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, HW
Date: 6-8-~~04~~ SMF 01
Weather: sunny warm (~60's)
Location Description: ~~Shoreline~~ SMF Marcus Flats N of Pingston Creek
Uncorrected GPS Coordinates: N48° 39' 9.31" W118° 5' 6.86"
Corrected GPS Coordinates:
GPS File Name: Q060816A
Sampling Method: hand auger, bowl-spoon
WESTON Sample No: CR-062-SD
Water Depth to Sediment: 2 feet
CLP #s: JX804/MJOBK4
Photograph: roll: SMF 7 9 SMF exposure: 14, 15
EPA Tracking No.: 01234124
Analyses: Metals, Pest/PCB, TOC

916122 → GPS Serial #

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0945	~18"-24"	15 SMF % gravel 45 SMF % sand 45 % silt ~10 % clay gravel up to 1" long; sand fine to very fine. Saturated grayish brown. No odor, no observed slag. Minor organics incl. rootlets

Notes: photo 14 - sample loc. ~30' offshore from current waterline (~2' depth of water)
photo 15 - sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, HW

Date: 6-8-01 Weather: Sunny

Location Description: Unnamed ephemeral T37N R38E, Sect 22 (NW¼)

Uncorrected GPS Coordinates: N 48° 41' 07.42" W 118° 0' 54.67"

Corrected GPS Coordinates:

GPS File Name: Q060851A Sampling Method: bowl + spoon

WESTON Sample No: TR-~~128~~ 038-SD Water Depth to Sediment: N/A - Dry

CLP #s: JX805 / MJOBK5 Photograph: roll: SMF 7 exposure: 20-21

EPA Tracking No.: 01234125

Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1130	1"	<1 % gravel 60 % sand 40 % silt <1 % clay ~~Dry~~, soil odor. Grayish dark brown. Organics, including (~~[illegible]~~ damp) rootlets, ants, twig fragments ~1" long 5mm thick. No slag. Sand is very fine to fine

Notes: photo 20 - sample
21 - sample area; sample loc. in foreground, facing E
~~used~~ decon'd spoon SMF
sample loc ≥ 3' above MHW
sample = TR-038-SD

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, HN
Date: 6-8-01
Weather: sunny, hot (upper 70s)
Location Description: E. of Evans Campground Peninsula (Spring)
Uncorrected GPS Coordinates: N 48° 41' 46.23" W 118° 00' 53.56"
Corrected GPS Coordinates:
GPS File Name: Q060819B
Sampling Method: ~~E~~ spoon
WESTON Sample No: TR-~~129~~ 039 SD
Water Depth to Sediment: <1"
CLP #s: MJD BK6
Photograph: roll: SMF 7 exposure: 22-23
EPA Tracking No.: 01234126
Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1245	1.5"	0% gravel 40% sand 55-60% silt <5% clay Saturated. grayish brown sfc, dk gray beneath H_2S odor. Rootlets included in sample (some) & small worm. Sand is very fine.

Notes: sample material collected & homogenized in jar
photo 22 - sample area, facing east
23 - sample
used ~~decontaminated~~ spoon (non-ded.) SMF

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, HW

Date: 6-8-01 Weather: cloudy, warm (~70°)

Location Description: Unnamed ephemeral @ T37N, R38E, S22 (SW¼)

Uncorrected GPS Coordinates: N48° 41' 27.64 W 118° 0' 53.05"

Corrected GPS Coordinates:

GPS File Name: Q0160818A Sampling Method: bowl + spoon

WESTON Sample No: TR-~~127-SD~~ SMF TR-037-SD Water Depth to Sediment: N/A - Dry

CLP #s: JX807/MJ0BK7 Photograph: roll: SMF-9 exposure: 16-18-19

EPA Tracking No.: C1234127

Analyses: Metals, PCB/Pest, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1120	3.5"	5 % gravel 75 % sand 20 % silt <1 % clay Dry, grayish brown w/ abundant light cream-colored coarse sand and granule particles. Soil odor, no observed slag. Organics, including rootlets, + small woody pieces up to ½"
			thin stick fragments make up ~ 20% of sample material. gravel as granules. Sand ranges from

Notes: photo 16 - sad fish showing skin lesions + discoloration in mouth of creek bed.
photo 18 + photo 17 - Sample area - photo 18 view West to lake from sample loc; 17 - view upstream
photo 19 - sample
sample ≥ 4' above MHW
~~used dermal spoon~~ SMF
One small snail shell observed in sample

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB, SMF

Date: 10-9-01 Weather: Sunny, breezy, warm (70s)

Location Description: Tributary #90 (T38N R37E, S33 SW¼-Drains Nettle, Lake [illegible])

Uncorrected GPS Coordinates: N 48° 29' 23.65" W 118° 09' 53.83"

Corrected GPS Coordinates:

GPS File Name: M060922A Sampling Method: spoon

WESTON Sample No: TR-128-SD Water Depth to Sediment: N/A-Dry

CLP #s: MJOBK8 Photograph: roll: KB 4 exposure: 6 & 7

EPA Tracking No.: 01234128

Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1500	4"	<1 % gravel 60 % sand ~35 % silt <5 % clay. Moist. Dark grayish brown. No odor. Gravel as granules. Minor amts of plant detritus (<5% of sample) Sand is very fine. No slag

Notes: Sample collected & thoroughly homogenized in jar.
photos 6 - sample loc. facing E
7 - sample, facing E

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, KB

Date: 6-9-01 Weather: sunny, breezy, warm (70°)

Location Description: TRIBUTARY # 91 (T36N R37E S33 NW¼) SMF 10-25-01

Uncorrected GPS Coordinates: N 48° 29' 31.15" W 118° 9' 44.34"

Corrected GPS Coordinates: _____

GPS File Name: M0609 22B Sampling Method: bowl & spoon

WESTON Sample No: TR-129-SD Water Depth to Sediment: N/A - DRY

CLP #s: JX 793 / MJ 0BK9 Photograph: roll: KB4 exposure: 8+9

EPA Tracking No.: 01234129

Analyses: TAL Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1530	6"	<0.5% gravel 5 ~~15~~ SM % sand 65% silt 30% clay Dry. Grayish brown. Gravel angular. Organics, incl. rootlets make up ~10-15% of sample. Soil odor. No slag. Clods of silt included. Sand is very fine.

Notes: photo 8 - facing E sample
photo 9 - facing E sample location area
Sample loc. is steep bluff area, mossy

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, KB
Date: 6-9-01
Weather: cloudy, warm (70's)
Location Description: ~~Distributary~~ SMF Adjacent to Tributary 100; Unmapped trib SMF T35N, R37E, Sec 33 KB 10/3/01
Uncorrected GPS Coordinates: N 48° 36' 15.3" W 119° 08' 09.45"
Corrected GPS Coordinates:
GPS File Name: M0061009
Sampling Method: ~~bowl~~ SMF spoon
WESTON Sample No: TR-125 SD
Water Depth to Sediment: 1"
CLP #s: MJOBJ4
Photograph: roll: KB4 exposure: 11+12
EPA Tracking No.: 0123444 SMF/136
Analyses: TAL Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1730	3"	<1 % gravel 70 % sand 20 % silt 10 % clay Wet, dark gray. No odor. Sand ranges in size from very coarse to very fine, predom. very fine to med.

Notes: Sample collected + homogenized in jar.
photo 11 - sample, facing SW
12 - area, facing E, taken from sampling point (downstream)

6-10-01 - changed tracking # to -136 SMF
10-25-01 SMF Adjacent to TS051

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, HW

Date: 6-8-01 Weather: cloudy, 70s, breezy, rain

Location Description: Fifteen mile Creek

Uncorrected GPS Coordinates: N 48° 49' 12.64" W 117° 59' 16.6"

Corrected GPS Coordinates:

GPS File Name: Q060823A Sampling Method: bowl + spoon

WESTON Sample No: TR-040 SMF-SD Water Depth to Sediment: 3"

CLP #s: JX 795 / MJO BJ5 Photograph: roll: SMF 8 10 exposure: 4+5

EPA Tracking No.: 012341 ~~15~~ SMF 37

Analyses: TAL Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1645	3"	<5 % gravel 85 % sand 10 % silt <1 % clay Saturated. Dark gray to brown. Organics including rootlets, leaf debris & fine organic particles, insect 'shells' make up ≤20% of sample. Gravel as granules.
			Sand ranges from very coarse (primarily), to very fine. Coarse sand + granules are angular.

Notes: photo 4 - sample area
photo 5 - sample
Sample location - sfc. layer of plant debris (~1" thick organic layer total) leaves & twigs, and an organic "fluff" layer over coarse sand.

6-10 SMF Tracking # changed to -115

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: SMF, HW
Date: 6-8-01
Weather: Sunny, 70s
Location Description: Flat Creek
Uncorrected GPS Coordinates: N48° 49' 32.56" W 118° 58' 40.28"
Corrected GPS Coordinates:
GPS File Name: Q0608221
Sampling Method: bowl + spoon
WESTON Sample No: TR-~~836~~ 841 SD
Water Depth to Sediment: 1"
CLP #s: JX796/MJ0BJ6
Photograph: roll: SMF ~~SMF~~ exposure: ~~24+25~~ SMF9-24 T SMF10-1 10/31/01
EPA Tracking No.: C1234~~4~~ SMF 138
Analyses: Metals, Pest/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1430	1"	0 % gravel 60 % sand ~30 % silt < 10% clay Saturated. Med. brown to dk grayish brown. Organics incl. rootlets, woody fragments <1% of sample, though fine organics are abundant. Sand ranges from very fine to very coarse, primarily fine No odor no slag

Notes: ~~used discont spoon~~ (non-~~dedicated~~) SMF
photo SMF #7 - ~~#24~~ AB sample loc (#25)
SMF9-24
SMF 10-1
photo ~~SMF-#5-#7~~ AB - sample
Sample location ≥ 5' above lake MHW (estimated)
6-10 Sample time recorded on labels as 1500 SMF
tracking # changed to -138

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB

Date: 6/8/2007 Weather: OVERCAST 65°F

Location Description: RATTLESNAKE CREEK

Uncorrected GPS Coordinates: N48° 51' 28.60" W117° 54' 04.31"

Corrected GPS Coordinates:

GPS File Name: M060818A Sampling Method: BOWL / SPOON

WESTON Sample No: TR-~~044~~ 042 SD Water Depth to Sediment: 4"

CLP #s: MJOBJ7 / JX797 Photograph: roll: KB#3 exposure: 20/21

EPA Tracking No.: 01234~~117~~ 139

Analyses: TAL METALS / PEST / PCB / TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1145	5"	(5% FINE GRAVEL / 20% COARSE SAND, 25% MEDIUM SAND, 40% FINE SAND / 10% SILT / 0% CLAY), BROWN, NO ODOR OR SLAG, OCCASIONAL ROOTS, NO OTHER DEBRIS.
2	1145	"	
3	1145	"	

Notes: PHOTO 20 TAKEN FACING NE
PHOTO 21 TAKEN FACING NE

6-9-07 SMF - sample renamed TR-042-SD
6-10-07 SMF - tracking # changed to -139

Sampler's Signature: KB

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB

Date: 6/8/2007 Weather: SCATTERED CLOUDS 70°F

Location Description: ONION CREEK

Uncorrected GPS Coordinates: N 48° 52' 23.49" W117° 50' 46.41"

Corrected GPS Coordinates: _____

GPS File Name: M060819A Sampling Method: BOWL / SPOON

WESTON Sample No: TR-~~045~~ 043-SD Water Depth to Sediment: 1"

CLP #s: MJOBJ8 / JX798 Photograph: roll: KB exposure: 22/23

EPA Tracking No.: 01234~~118~~ SNF 140

Analyses: TAL METAL, DEST/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1300	4"	(0% GRAVEL / 2% COARSE SAND, 15% MEDIUM SAND / 80% FINE SAND / 3% SILT / 0% CLAY), DARK BROWN, NO ODOR OR SLAG, OCASSIONAL TWIGS AND ROOTS, NO OTHER DEBRIS.
SNF ~~2~~	~~1300~~	~~4"~~	"
SNF ~~3~~	~~1300~~	~~4"~~	"

Notes: PHOTO 22 TAKEN FACING E
PHOTO 23 TAKEN FACING. E

6-9 Sample renamed TR-043-SD SNF
6-10 Tracking number changed to -140 SNF

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF / KB

Date: 6/9/2001 Weather: OVERCAST 65°F

Location Description: SQUAW CREEK

Uncorrected GPS Coordinates: N 48° 53' 43.72" W 117° 49' 37.22"

Corrected GPS Coordinates: _____

GPS File Name: MD60917A.044 GS Sampling Method: BOWL / SPOON

WESTON Sample No: TR-~~046~~ SD Water Depth to Sediment: 2"

CLP #s: MJ0BJ9 / JX799 Photograph: roll: KB4 exposure: 4/5

EPA Tracking No.: ~~01234119~~ 01234141

Analyses: METALS; PCB/PESTS, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1030	1-4"	(3% FINE GRAVEL / 10% COARSE SAND. 50% MEDIUM SAND, 27% FINE SAND / 10% SILT / 0% CLAY), BROWN, NO ODOR OR SLAG, 1% LEAF DEBRIS, MOSS, THIN TWIG FRAGMENTS, NO OTHER DEBRIS
SW ~~2~~	~~1030~~	"	"
SW ~~3~~	~~1030~~	"	"

Notes: PHOTO 4 TAKEN FACING NW
PHOTO 5 TAKEN FACING SE.
• CHANGED EPA TRACKING # FROM 01234119 TO 01234141 [illegible]

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SF / KB

Date: 10/9/2001 Weather: OVERCAST ~65°F

Location Description: BEAR CREEK

Uncorrected GPS Coordinates: N 48°54' 31.00" W 117°48' 41.45"

Corrected GPS Coordinates:

GPS File Name: M060916 A / 045 KB Sampling Method: BOWL / SPOON

WESTON Sample No: TR. ~~047~~ SD Water Depth to Sediment: DRY TRIB

CLP #s: MJ0BK0 / JX 800 Photograph: roll: KB4 exposure: 2/3

EPA Tracking No.: ~~01234120~~ - 01234142 KB

Analyses: METALS, PEST/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0930	2"	(1% FINE GRAVEL / 70% FINE SAND / 25% ~~10-20%~~ SILT / ~~10%~~ 5%), DARK BROWN, ~~SO~~ NO ODOR OR SLAG, SCATTERED ROOTS, SMALL PLANTS 1% OF SAMPLE, NO OTHER DEBRIS,
~~2~~ SF	0930	"	"
~~3~~ SF	0930	"	"

Notes:
- PHOTO 2 TAKEN FACING NW
- PHOTO 3 TAKEN FACING N/W
- MS / MSD
- CHANGED EPA TRACKING # FROM 01234120 TO 01234142 KB

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: SMF, HW

Date: 6-8-01 Weather: cloudy 70s

Location Description: Ephemeral trib @ mouth of Flat Creek

Uncorrected GPS Coordinates: N48° 49' 20.34" W117° 58' 41.17"

Corrected GPS Coordinates:

* GPS File Name: Q060822B Sampling Method: Spoon

WESTON Sample No: TR ~~136~~ 127 SMF SD Water Depth to Sediment: N/A - dry

CLP #s: MJ0BJ2 Photograph: roll: SMF 10 exposure: 2 & 3

EPA Tracking No.: 01234 ~~112~~ SMF 143

Analyses: Metals

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1545	6"	0 % gravel 70 % SAND ~30 % silt <) % clay Moist soil. Med brown. No odor, no slag Organics incl. rootlets + humus material (fine) make up ~50 % of sample

Notes: Sample collected + thoroughly homogenized in sample jar.
photo 2 - sample
3 - sample area
Trib is dry, channel indistinct, may branch
We chose a likely low trace of a pass channel
* position collected ~ 30' SMF North of sample location.

Sampler's Signature: [signature]

6-10- Tracking # changed to -143
sample renamed TR-127-SD 6-9-01 SMF

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / RW

Date: 6/25/2001 Weather:

Location Description: UNNAMED S20 T38N R40E SW 1/4

Uncorrected GPS Coordinates: N 48° 46' 46.12" W 117° 47' 37.25"

Corrected GPS Coordinates:

GPS File Name: R062516A Sampling Method: Boxx / SPOON

WESTON Sample No: BK-130-SD Water Depth to Sediment: 1 1/2"-2"

CLP #s: JX810/MJOBN3 Photograph: roll: ~~KB#4~~ exposure: 6/7

EPA Tracking No.: 01264050 SMF #10 KB5-6/7 10/31/01

Analyses: TAL METALS / PEST/PCB / TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0945	3"	3% FINE GRAVEL / 5% COARSE SAND, 57% MEDIUM SAND, 25% FINE SAND / 10% SILT / 0% CLAY) DARK BROWN, NO ODOR, SLAG, ORGANICS, OR OTHER DEBRIS.

Notes: PHOTO 6 TAKEN FACING NW
PHOTO 7 TAKEN FACING E

Unnamed tributary to Onion Creek SMF 10-25-01 Van Stone Mine

~~Tributary~~ to Tom Bush ~~Creek~~ SMF 10-25-01 SMF

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/RW

Date: 10/25/01 Weather: OVERCAST 60F

Location Description: UNNAMED S34 T38N R40E SW 1/4

Uncorrected GPS Coordinates: N48° 45' 01.76" W117° 45' 13.89"

Corrected GPS Coordinates:

GPS File Name: R062521A Sampling Method: Bur / SPOON

WESTON Sample No: BK.131.SD Water Depth to Sediment: 2"

CLP #s: JX911 / MJ0BN4 Photograph: roll: ~~EB#4~~ exposure: 14/15

EPA Tracking No.: 01264051 SMF #8 KB5 - 14/15 10/31/01

Analyses: TAL METALS / PEST / PLB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1315	3"	(10% FINE GRAVEL / 30% COARSE SAND, ~~50%~~ 45% MEDIUM SAND, 10% FINE SAND / 5% SILT / 0% CLAY), GREYISH BROWN, NO
			ODOR, SLAG, ORGANICS, OR OTHER DEBRIS.

Notes: PHOTO 14 TAKEN FACING NE
PHOTO 15 TAKEN FACING NE

* SAMPLE TIMES WRITTEN AND RECORDED AS 1315 → ACTUAL TIME 1415.

Unnamed tributary to Onion Creek - Van Stone Mine SMF 10-25-01

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / RW

Date: 6/25/01 Weather: OVERCAST 60°F

Location Description: UNNAMED S 34 T 30N R 40E SW 1/4

Uncorrected GPS Coordinates: N 48° 45" 01.85" W 117° 45' 13.69"

Corrected GPS Coordinates: _____

GPS File Name: R062520B Sampling Method: 1 L POLY

WESTON Sample No: BK-132-SW Water Depth to Sediment: —

CLP #s: MJ0BN5 Photograph: roll: ~~KB#4~~ KB#5 exposure: 12/13 ~~SMEAR~~ KB

EPA Tracking No.: 01264052

Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1345	—	WATER SAMPLE COLLECTED IN 1 L POLY.

Notes: PHOTO 12 TAKEN FACING NE
PHOTO 13 TAKEN FACING NW

· STREAM RATE ESTIMATED AT ~~Z~~ 19 KB AL / MIN

Unnamed tributary to Onion Creek Van Stone Mine [illegible] 10-25-01

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/RW

Date: 10/25/2001 Weather: OVERCAST 60°F

Location Description: S 34 T38N R40E, SW 1/4 10/31/01

Uncorrected GPS Coordinates: N 48°45' 27.15" W 117°44' 37.48"

Corrected GPS Coordinates:

GPS File Name: R062520A Sampling Method: Bowl/Spoon

WESTON Sample No: BK-133-SD Water Depth to Sediment: —

CLP #s: JX813/MJ0BN6 Photograph: roll: ~~KB#4~~ exposure: 10/11 ~~SMF~~ KB 5 ~~8~~

EPA Tracking No.: 01264053

Analyses: TAL METALS / PEST / PCB / SVOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
	1300		(0% GRAVEL / 5% COARSE SAND, 0% MEDIUM SAND, 75% FINE SAND / 20% SILT / 0% CLAY) BROWN.
			NO ODOR, SLAG, OCCASIONAL ROOTS, NO OTHER DEBRIS.

Notes: PHOTO 10 TAKEN FACING SW
PHOTO 11 TAKEN FACING SW
• SAMPLE TAKEN WAS A SOIL SAMPLE NOT ASSOCIATED WITH ANY TRIBUTARY.
• MS/MSD FOR SVOC.

Van Stone Mine Rail SMF 10-25-01

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / RW

Date: 6/25/01 Weather: SUNNY 65°F

Location Description: S34 T38N R40E SW 1/4

Uncorrected GPS Coordinates: N 48° 45' 01.49" W117° 45' 11.16"

Corrected GPS Coordinates:

GPS File Name: R062521C Sampling Method: BOWL / SPOON

WESTON Sample No.: BK·134·SD Water Depth to Sediment:

CLP #s: JX814 / MJ0BN7 Photograph: roll: ~~KB~~ #4 exposure: 16/17

EPA Tracking No.: 01264054

Analyses: PEST / PCB / SVOC, TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1445	4"	(0% GRAVEL / ~~3%~~ 0% COARSE SAND, 20% MEDIUM SAND, 30% FINE SAND / 40% SILT / 10% CLAY). BROWN, NO
			ODOR, NO SLAG, SCATTERED ROOTS, NO OTHER DEBRIS.

Notes: PHOTO 16 TAKEN FACING NW
PHOTO 17 TAKEN FACING NW

- SAMPLE COLLECTED IS A SOIL SAMPLE NOT ASSOCIATED WITH ANY TRIBUTARY OR STREAM.

Van Stone Mine soil SMF 10-25-01

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/RW

Date: 6/25/01 Weather: OVERCAST 60°F

Location Description: S33 T38N R40E SE 1/4

Uncorrected GPS Coordinates: N48°45'10.78" W117°45' 31.78

Corrected GPS Coordinates:

GPS File Name: P062522E Sampling Method: BOWL/SPOON

WESTON Sample No: BK-135-SD Water Depth to Sediment: —

CLP #s: MJ0BN8/JX815 Photograph: roll: ~~KB#4~~ exposure: 18/19 SMU 655 ~~EOF~~ 60

EPA Tracking No.: 01264055

Analyses: TAL METALS / PEST / PCB / SVOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1500	6"	(0% GRAVEL / 0% COARSE SAND, 0% MEDIUM SAND, 75% FINE SAND / 20% SILT / 5% CLAY) REDISH BROWN, NO
			ODOR OR SLAG, OCCASSIONAL ROOTS, NO OTHER DEBRIS

Notes: PHOTO 18 TAKEN FACING NW
PHOTO 19 TAKEN FACING NW

SOIL ~~SE~~ SAMPLE, NOT ASSOCIATED WITH ANY TRIBUTARY OR STREAM.

Van Stone Mine rail 10-25-01

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / RL

Date: 6/27/01 Weather: SAMPLING ~ 60 F

Location Description: UNNAMED S9 ~~TD~~ T30N R37E ~~SE~~ NE 1/4

Uncorrected GPS Coordinates: N 48° 06' 57.33" W 118° 01' 37.56"

Corrected GPS Coordinates:

GPS File Name: ROG2721A Sampling Method: BOOM / SPOON

WESTON Sample No: TR-136-SD Water Depth to Sediment: 3"

CLP #s: TX 8161 MJ0AN9 Photograph: roll: ~~KB 5~~ 6AB exposure: 9/10

EPA Tracking No.: 01264056

Analyses: TAL METALS, PEST/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1430	5"	(10% FINE GRAVEL / 15% COARSE ~~GRA~~ SAND, 45% MEDIUM SAND, 25% FINE SAND / 5% SILT / 0% CLAY),
			BROWN, NO ODOR OR SLAG, NO ORGANICS OR OTHER DEBRIS.

Notes: PHOTO 9 TAKEN FACING E
PHOTO 10 TAKEN FACING SE

Unnamed tributary to Hunter's Creek, Cleveland Mine SDF 10 25 01

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/RW

Date: 6/26/01 Weather: OVERCAST 65°F

Location Description: ~~DEE~~ UNNAMED S20T37N R41E NE1/4

Uncorrected GPS Coordinates: N48°41'51.00" W117°39'28.39"

Corrected GPS Coordinates:

GPS File Name: R062617A Sampling Method: Bowl / Spoon

WESTON Sample No: BK-138-SD Water Depth to Sediment: 8"-10"

CLP #s: JX818/MJ0BP1 Photograph: roll: ~~KB#4~~ exposure: 20/21

EPA Tracking No.: 01264058 KB5 ~~[illegible]~~ LB

Analyses: TAL METALS, PEST/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1000	4"	(~~15%~~ LB 10% FINE GRAVEL/10% COARSE SAND, 40% MEDIUM SAND, 35% FINE SAND/ 5% SILT/0% CLAY) BROWN, NO ODOR,
			NO SLAG, NO ORGANICS OR ANY OTHER DEBRIS.

Notes: PHOTO 20 TAKEN FACING W
PHOTO 21 TAKEN FACING N

- GPS LOCATION ~ 180" - 180' ABOVE ROAD.

Tributary to Deep Creek SMF10-25-01

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / RW

Date: 6/25/2001 Weather: OVERCAST 60°F

Location Description: UNNAMED S34 T38N R40E SW1/4 AB 10/31/01

Uncorrected GPS Coordinates: N 48°45' 24.25" W 117°44' 37.20"

Corrected GPS Coordinates:

GPS File Name: R0602519B Sampling Method: Bone / SPOON

WESTON Sample No: BK-139-SD Water Depth to Sediment: 2"

CLP #s: JX819 / MJ0BP2 Photograph: roll: ~~KB~~ #4 exposure: 8/9

EPA Tracking No.: 01264059 ~~SMF 8~~ ~~KB~~ KB5

Analyses: TAL METALS / PEST / PCB / TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1215	3"-4"	(15% FINE GRAVEL / ~~25%~~ 45% COARSE SAND, 30% ~~FIN~~ MEDIUM SAND, 10% FINE SAND // 0% SILT / 0% CLAY) BROWN, NO
			ODOR OR SLAG OR ORGANICS OR ANY OTHER DEBRIS

Notes: PHOTO 8 TAKEN FACING S
PHOTO 9 TAKEN FACING E

Tributary to Onion Creek; Van Stone Mine SMF 2001

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB / LW

Date: 10/26/01 Weather: OVERCAST ~60°F

Location Description: SOUTH FORK DEEP CREEK S29 T38N R41E NW1/4

Uncorrected GPS Coordinates: N48° 46' ~~0.795~~ 07.95" W117° 39' 59.86"

Corrected GPS Coordinates: _____

GPS File Name: R0626 19 A Sampling Method: Bowl / Spoon

WESTON Sample No: BK-140-SD Water Depth to Sediment: 3'-4"

CLP #s: JX820 / MJ0BP3 Photograph: roll: ~~KB #4~~ KBS ~~SESALF 8 KB~~ exposure: 22/23

EPA Tracking No.: 01264060

Analyses: TAL METAL; DEST/PCB; TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1230	1"	(0% FINE GRAVEL / 10% COARSE SAND, 50% MEDIUM SAND, 35% FINE SAND / 5% SILT / 0% CLAY), BROWN NO ODOR, NO SLAG, NO ORGANICS, NO OTHER DEBRIS.

Notes: PHOTO 22 TAKEN FACING N
PHOTO 23 TAKEN FACING N

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KBI RW

Date: 6/26/01 Weather: OVERCAST ~65°F

Location Description: SOUTH FORK DEEP CREEK S29 T38N R41E NW 1/4

Uncorrected GPS Coordinates: N48°46'07.95" W117°39'59.86"

Corrected GPS Coordinates: _____

GPS File Name: P062619A Sampling Method: 1 L POLY

WESTON Sample No: BK-141-SW Water Depth to Sediment: —

CLP #s: ~~01264061~~ MJ0BP4 KB Photograph: roll: ~~KB#4~~ exposure: 24/25

EPA Tracking No.: 01264061 KB5 ~~SAMPLE 2~~ KB

Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1245	—	WATER

Notes: PHOTO 24 TAKEN FACING N
PHOTO 25 TAKEN FACING N

~~CO LOCATED~~ SAME WATER SAMPLE WITH BK-140-SD GPS COORDINATES AND FILE ARE THE SAME AS ABOVE.
SAMPLE PRESERVED WITH HNO_3 TO A pH of 2

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: KB/RW
Date: 6/26/01
Weather: OVERCAST ~60°F
Location Description: UNNAMED S30 T39N R41E NW 1/4
Uncorrected GPS Coordinates: N 48°51'46.37" W 117°41' 23.13"
Corrected GPS Coordinates:
GPS File Name: R062623A
Sampling Method: BOWL/SPOON
WESTON Sample No: BK-142-SD
Water Depth to Sediment: 2"
CLP #s: JX822/MJOBP5
Photograph: roll: KD ~~5~~ 6 exposure: 3/4
EPA Tracking No.: 01264062
Analyses: TAL METALS, PEST/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1615	8"-10"	(0% GRAVEL/0% SAND/95% SILT/5% CLAY), DARK BROWN, SLIGHT ORGANIC ODOR, NO SLAG, 25% ORGANIC MATERIAL -
			ROOTS, LEAVES, NO OTHER DEBRIS. TOP 2" OF SEDIMENT WAS ~~ENTIR~~ PREDOMINANTLY ORGANIC MATTER - SUCH AS LEAVES, AND WAS NOT INCLUDED
			IN SAMPLE.

Notes: PHOTO 3 TAKEN FACING N
PHOTO 4 TAKEN FACING N

Tributary to Deep Creek; Last Chance Mine SMF 10-25-01

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/RW

Date: 10/26/01 Weather: OVERCAST 60°F

Location Description: UNNAMED S30 T39N R41E NW 1/4

Uncorrected GPS Coordinates: N 48° 51' 46.37" W 117° 41' 23.13"

Corrected GPS Coordinates:

GPS File Name: D0626 23A Sampling Method: 1 L POLY

WESTON Sample No: BK-143-SW Water Depth to Sediment: —

CLP #s: MJ0BP6 Photograph: roll: KB/5 exposure: 1/2

EPA Tracking No.: 01264063 10/26

Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1600	—	WATER SAMPLE

Notes: PHOTO 1 TAKEN FACING N
PHOTO 2 TAKEN FACING N

WATER SAMPLE ~~COLOCATED~~ SAF WITH BK-14230
SAMPLE PRESERVED WITH HNO_3 TO A pH of 2

50 SEC/LITRE
Tributary to Deep Creek; LAST CHANCE MINE SAF 10-25-01

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/RW

Date: 6/27/01 Weather: OVERCAST 60°F

Location Description: UNNAMED S9 ~~T~~ T30N R37E NE 1/4

Uncorrected GPS Coordinates: N 48° 07' 16.45" W 118° 02' 24.90"

Corrected GPS Coordinates:

GPS File Name: R062723A Sampling Method: BOWL/SPOON

WESTON Sample No: TR.147.SD Water Depth to Sediment: 5"

CLP #s: JX825/MJ0BP8 Photograph: roll: KB"X 6 KB exposure: 13/14

EPA Tracking No.: 01264065

Analyses: TAL METALS PEST/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1630	3"	(5% FINE GRAVEL/15% COARSE SAND, 35% MEDIUM SAND, 40% FINE SAND/5% SILT/0% CLAY), BROWN,
			NO ODOR OR SLAG. NO ORGANICS OR OTHER DEBRIS.

Notes: PHOTO 13 TAKEN FACING W
PHOTO 14 TAKEN FACING W

~~COLOCATED~~ SMF WITH SURFACE WATER SAMPLE TR 148 SW

~~16/20 SEC~~

Tributary to Hunter's Creek; Cleveland Mine SMF 10-25-01

Sampler's Signature: [signature]

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: KB/ KW
Date: 6/27/01
Weather: OVERCAST 60°F
Location Description: UNNAMED S9 T30N R37E NE 1/4
Uncorrected GPS Coordinates: N 48° 07' 16.45" W 118° 02' 24.90"
Corrected GPS Coordinates:
GPS File Name: R062723A
Sampling Method: 1L POLY
WESTON Sample No: TR·148·SW
Water Depth to Sediment: –
CLP #s: MJ0BP9
Photograph: roll: KB5 exposure: 15/16
EPA Tracking No.: 01264066 6 KB
Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1645	–	SURFACE WATER

Notes: PHOTO 15 TAKEN FACING W
PHOTO 16 TAKEN FACING W

~~COLOCATED~~ SAF WITH SEDIMENT SAMPLE
TR 147 SD

1L / 20 SEC

Tributary to Hunter's Creek; Cleveland Mine SAF 10-25-01

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: KB / RW
Date: 10/27/01
Weather: OVERCAST ~60°F
Location Description: UNNAMED S 28 TR 40 R41E SW 1/4
Uncorrected GPS Coordinates: N 48° 56' 46.79" W 117° 30' 46.03"
Corrected GPS Coordinates:
GPS File Name: R062717B
Sampling Method: BOWL / SPOON
WESTON Sample No: BK-150-SD
Water Depth to Sediment: 1"
CLP #s: JX827 / MJ0BQ1
Photograph: roll: KB6 exposure: 5/6
EPA Tracking No.: 02264068
Analyses: TAL METALS, PEST / PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0900	3"	(10% FINE GRAVEL / 20% COARSE SAND, 40% MEDIUM SAND, 25% FINE SAND / 5% SILT / 0% CLAY) BROWN
			WITH LIGHTER CLASTS, NO ODOR OR SLAG OR OTHER DEBRIS, OCCASSIONAL WOODY DEBRIS (~5%)

Notes: PHOTO 5 TAKEN FACING S
PHOTO 6 TAKEN FACING N

~~CO LOCATED~~ SF WATER SAMPLE BK / SI SW

GPS LOCATION AT CONFLUENCE OF ADIT DISCHARGE AND STREAM. SAMPLE LOCATION ~200' UPSTREAM DISREGARD GPS FILE R062717A

Sampler's Signature: [signature]

TRIBUTARY to Tom Bush Creek; Melrose Mine SMF 10-25-01

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00
Sampling Personnel: KB/RW
Date: 6/27/01
Weather: OVERCAST - 60°F
Location Description: UNNAMED S28T40N R41E SW 1/4
Uncorrected GPS Coordinates: N 48°56'46.79" W 117°38'46.03"
Corrected GPS Coordinates:
GPS File Name: R0627173
Sampling Method: 1 L POLY
WESTON Sample No: BK-157-SW
Water Depth to Sediment:
CLP #s: MJ0BQ2
Photograph: roll: KB6 exposure: 7/8
EPA Tracking No.: 01264069
Analyses: TAL METALS

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	0930	–	SURFACE WATER SAMPLE

Notes: PHOTO 7 TAKEN FACING S
PHOTO 8 TAKEN FACING N

~~COLLECTED~~ SMF WITH A SEDIMENT SAMPLE BK-150-SD

GPS LOCATION AT CONFLUENCE OF MINE ADIT DISCHARGE AND STREAM. SAMPLE LOCATION ~ 200' UPSTREAM. DISREGARD GPS FILE R0627173A

Sampler's Signature:

TRIBUTARY to Tom Bush Creek; Melrose Mine SMF 10-25-01

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: KB/ RW

Date: 6/27/01 Weather: OVERCAST 60°F

Location Description: PARKING LOT OF COLVILLE COMFORT INN

Uncorrected GPS Coordinates:

Corrected GPS Coordinates:

GPS File Name: Sampling Method: WATER COLLECTED FROM DECON BOWL/ SPOON

WESTON Sample No: R'-004-SD Water Depth to Sediment:

CLP #s: JX830 / MJ0B94 Photograph: roll:_____ exposure: _____

EPA Tracking No.: 01264071

Analyses: TAL METALS, PEST/PCBS, SVOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
	0700	—	—

Notes: RINSATE BLANK OF DECONED SPOON AND BOWL

Sampler's Signature:

WESTON

UPPER COLUMBIA/LAKE ROOSEVELT ESI (TDD: 01-02-0001-A)

SURFACE SEDIMENT FIELD SAMPLING RECORD

Project Number: 12644.001.002.0101.00 Sampling Personnel: RB / RW

Date: 6/28/07 Weather: OVERCAST 60°F

Location Description: SOUTH FORK FLUME CREEK

Uncorrected GPS Coordinates: N48° 52' 18.47" W117° 23' 35.88"

Corrected GPS Coordinates:

GPS File Name: R0628173 Sampling Method: BASKET/SPOON

WESTON Sample No: BK.153.SD Water Depth to Sediment: 8-12"

CLP #s: JX831 / MJOBQ5 Photograph: roll: ~~KB~~ 6 KB exposure: 22/23

EPA Tracking No.: 0126073

Analyses: TAL METALS, PEST/PCB, TOC

Grab #	Time	Penetration Depth	Sample Material Physical Description [Grain Size (% gravel/sand/silt/clay), Color, Odor, Slag, Organics, Debris, Etc.]
1	1045	3-4"	(5% FINE GRAVEL / 15% COARSE SAND, 40% MEDIUM SAND, 35% FINE SAND / 5% SILT / 0% CLAY) GREYISH BROWN, NO ODOR OR SLAG, NO ORGANICS OR OTHER DEBRIS.

Notes: PHOTO 22 TAKEN FACING NW
PHOTO 23 TAKEN FACING NW

~~COLOCATED~~ WITH SURFACE WATER SAMPLE BK.154.SW.

Sampler's Signature: [signature]

APPENDIX C

XRF SCREENING RESULTS REPORT

received 8-6-01 SMF

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

July 25, 2001

MEMORANDUM

SUBJECT: Field Screening Metals Results for the Upper Columbia River - Lake and Tributary Area Analyses

FROM: Gerald H. Dodo
USEPA

TO: Mark Ader
USEPA

cc: Susan Fitzgerald
Weston

Attached to this memo are the field screening analysis results for lead, zinc, and copper acquired by ESAT for 125 samples at the Upper Columbia River lake and tributary areas. This work was performed under site account code 01T10P50102D106XLA00. The samples were analyzed in-situ using a Niton XL-723. Reference sample analyses were performed during each day of sample analyses using NIST SRM 2710 and SRM 2711. The reference sample results were within 20% of the stated true value except for zinc from the SRM 2711 analyses for 05/23/01 and 05/31/01 which were low. The SRM 2710 analyses results for zinc on these two days were acceptable, however, the concentration is much higher for this sample. The reported zinc results ~~for~~ sample analyses performed on 05/23/01 and 05/31/01 may be biased low if <5000 mg/kg. All results were qualified F, acquired by a field screening method.

If you have any questions, please contact me at (360)871-8728.

Summary of XRF Screening Results
Lake Roosevelt Lake and Tributary Study

Results in mg/Kg

XLNo	Sample ID	Date/Time	Pb	Zn	Cu
37	1204115	5/17/01	< 25	< 165	< 450
38	1204115	5/17/01	26	< 105	< 300
39	1204115	5/17/01	42	< 210	< 615
40	1204115	5/17/01	41	< 117	< 315
41	1204115 Sampled	5/17/01	29	< 93	< 255
42	1204116	5/17/01	60	< 255	< 705
44	1204116 Sampled	5/17/01	95	216	< 93
45	1204116	5/17/01	74	143	< 165
51	1204119 Sampled	5/18/01	424	823	< 330
52	1204119	5/18/01	236	472	< 210
53	1204119	5/18/01	108	218	< 255
55	1204121	5/18/01	224	480	< 195
56	1204121	5/18/01	185	387	< 300
57	1204121 Sampled	5/18/01	194	522	< 144
58	1204121	5/18/01	28	< 165	< 465
60	1204122 Sampled	5/18/01	163	460	< 540
61	1204122	5/18/01	88	155	< 405
62	1204122	5/18/01	161	425	< 465
63	1204122	5/18/01	110	196	< 285
65	1204123	5/18/01	242	616	< 540
66	1204123	5/18/01	225	597	< 615
67	1204123 Sampled	5/18/01	223	640	< 375
69	1204125	5/19/01	96	226	< 128
70	1204125 Sampled	5/19/01	126	187	< 270
74	1204126 no sample	5/19/01	28	74	< 110
76	1204126 no sample	5/19/01	< 27	< 165	< 450
90	1214106	5/21/01	25	< 144	< 405
91	1214106	5/21/01	49	< 121	< 330
94	1214106	5/21/01	43	< 225	< 615
94	1214106	5/21/01	43	< 225	< 615
96	1214106 Sampled	5/21/01	196	474	< 375
98	1214116	5/21/01	238	666	< 147
99	1214116 Sampled	5/21/01	298	712	< 495
100	1214116	5/21/01	331	764	< 450
101	1214116	5/21/01	317	765	< 225
103	1214118 Sampled	5/21/01	361	1130	< 285

XLNo	Sample ID	Date/Time	Pb	Zn	Cu
104	1214118	5/21/01	250 F	571 F	< 750 F
106	1214101	5/21/01	47	< 115	< 300
107	1214101 Sampled	5/21/01	73	< 540	< 1500
113	1214122 Sampled	5/22/01	172	851	< 240
114	1214122	5/22/01	146	946	< 142
117	1214124	5/22/01	319	< 585	< 1650
118	1214124	5/22/01	249	902	< 390
119	1214124 Sampled	5/22/01	240	1060	< 270
122	1214126	5/22/01	121	589	< 165
123	1214126 Sampled	5/22/01	173	543	< 180
124	1214126	5/22/01	94	243	< 585
126	1214128	5/22/01	185	1230	< 345
127	1214128 Sampled	5/22/01	220	1250	< 465
128	1214128	5/22/01	159	1250	< 420
130	1214130	5/22/01	156	1100	< 225
131	1214130	5/22/01	176	< 465	< 1304
132	1214130	5/22/01	95	537	< 144
133	1214130	5/22/01	125	675	< 255
134	1214130	5/22/01	123	660	< 150
136	1214130	5/22/01	111	1050	< 145
137	1214130	5/22/01	122	896	< 330
138	1214130	5/22/01	118	1090	< 195
139	1214130 Sampled	5/22/01	508	6339	< 765
142	1214132	5/22/01	705	13299	1270
143	1214132 Sampled	5/22/01	1510	20698	1320
144	1214132	5/22/01	736	15194	1300
149	1214134	5/23/01	174	763	< 165
150	1214134	5/23/01	201	624	< 975
151	1214134	5/23/01	192	705	< 630
152	1214134	5/23/01	215	808	< 180
153	1214134	5/23/01	205	1050	< 315
154	1214134	5/23/01	103	< 390	< 1080
155	1214134	5/23/01	245	1819	< 195
156	1214134 Sampled	5/23/01	1080	12998	< 915
158	1214136	5/23/01	268	1500	< 1020
159	1214136	5/23/01	331	< 885	< 2549
160	1214136	5/23/01	250	1050	< 615
161	1214136 Sampled	5/23/01	326	3949	< 645
162	1214136	5/23/01	360	3440	< 210
164	1214138	5/23/01	94	488	< 195

XLNo	Sample ID	Date/Time	Pb	Zn	Cu
165	1214138 Sampled	5/23/01	169 F	2539 F	< 375 F
166	1214138	5/23/01	144	1170	< 225
167	1214138	5/23/01	79	593	< 270
168	1214138	5/23/01	227	1690	< 510
170	1214140	5/23/01	170	2650	274
171	1214140	5/23/01	192	2189	< 270
173	1214140 Sampled	5/23/01	189	3478	319
175	1214142	5/23/01	97	1040	< 270
175	1214142	5/23/01	97	1040	< 270
177	1214142 Sampled	5/23/01	349	4509	377
178	1214142	5/23/01	446	5427	460
179	1214142	5/23/01	153	3539	656
181	1214142	5/23/01	234	5658	773
183	1214144	5/23/01	301	7046	784
184	1214144 Sampled	5/23/01	611	8838	935
186	1214129	5/23/01	97	494	< 95
192	1214127	5/24/01	53	117	< 142
193	1214127	5/24/01	47	92	< 126
195	1214131	5/24/01	75	225	< 123
196	1214131	5/24/01	186	237	< 270
211	1224150	5/31/01	221	12896	1460
212	1224150 sampled	5/31/01	443	19699	< 2549
213	1224150	5/31/01	330	15898	1939
215	1224151	5/31/01	210	1420	< 180
216	1224151 sampled	5/31/01	190	2229	264
217	1224151	5/31/01	211	2120	170
218	1224151	5/31/01	189	2189	< 142
221	1224154	5/31/01	262	7770	962
222	1224154 sampled	5/31/01	281	12096	1570
224	1224155	5/31/01	328	11200	1140
225	1224155 sampled	5/31/01	300	13990	1659
228	1224157	5/31/01	229	11098	1650
229	1224157 sampled	5/31/01	346	12698	1440
236	1224160	6/1/01	203	5968	1180
237	1224160	6/1/01	337	9818	1470
238	1224160	6/1/01	200	10400	1380
239	1224160 sampled	6/1/01	411	16691	2450

XLNo	Sample ID	Date/Time	Pb	Zn	Cu
241	1224161	6/1/01	20 F	145 F	< 98 F
243	1224162 sampled	6/1/01	317	3179	317
244	1224162	6/1/01	260	2269	260
245	1224162	6/1/01	387	2850	397
247	1224163	6/1/01	198	16691	2469
249	1224165	6/1/01	523	934	< 89
251	1224164	6/1/01	142	2810	476
252	1224164	6/1/01	161	3229	348
253	1224164 sampled	6/1/01	260	5450	757
254	1224164	6/1/01	360	4560	772
255	1224164	6/1/01	193	4240	554
256	1224164	6/1/01	166	3170	524

APPENDIX D

CONTACT LOG

Appendix D—Upper Columbia River/Lake Roosevelt ESI Contact Log

Name	Agency/Company	Phone Number
Dwayne D'Andrea	BC boat guide	250/365-4238
Alan Woo	BC Hydro	604/528-7769
Julia Beatty	BC MELP	250/354-6750
Patti Stone	CCT	509/634-2415
Steve Tromly	CCT	(509)634-2696
Dennis Francis	City of Grand Coulee	509/631-0289
	Columbia Power Corp	250/365-8585
Leatta Dahlhoff	E&E	206/624-9537 (ext. 239)
Mark Brady	Environ. Int'l	206/525-3362
Mark Ader	EPA	206/553-1808
Monica Tonel	EPA	206/553-0323
Ginna Grepo-Grove	EPA	206/553-1632
Matt Gubitosa	EPA	206/553-5294
Phil Wong	EPA	
Laura Castrilli	EPA	206/553-4323
Chris Hall	EPA	206/553-0521
David Terpening	EPA	206/553-6905
Andy Hess	EPA	360/871-8711
Niel Amick	ESAT	360/871-8787
Craig Sprankle	Grand Coulee Public Affairs Officer	509/633-9503
Lonnie Johnson	Seattle City Light: Boundary Dam Operations Head	509/446-3083
Kimberly Hayes	Sentinel	256/534-9800, ext. 22
Cindy Hendrickson	U.S. Army Corps of Engineers	503/808-3945
Al Johnson	U.S. Forest Service	(541) 782-2283
Ray Dupuydt	National Parks Service, archaeologist	509/738-6266 (ext. 114)
Scott Hevner	National Parks Service, Natural Resources	509/738-6266 (ext. 105)
Gil Bortleson	USGS (retired)	(253) 428-3600
Mark Munn	USGS	253/428-3600 (ext. 2686)
Gig LeBret	National Parks Service	509/738-6266
Frank Anderson	National Parks Service	509/633-9441 ext. 132
Dan Mason	National Parks Service	509/633-9441
Dan Egal	West Kootenay Power	250/368-0508

APPENDIX E

CHAIN-OF-CUSTODY FORMS
AND
DATA VALIDATION REPORTS

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29469

1. Project Code: TEC-774A
2. Region No.: 10
Sampling Co.: ROY F. WESTON
4. Date Shipped: 6/26/01
Carrier: FEDEX

Account Code: 01T10P50102D106XLA00
Sampler (Name): KEVIN BROOM
Airbill Number: 8245 2414 7207

Site Name: COLUMBIA RIVER / LAKE ROOSEVELT
Sampler Signature: [signature]
5. Ship To: MITKEM CORPORATION
175 METRO CENTER BOULEVARD
WARWICK, RI 02886
401 732 3400
ATTN: AGNES NG

City, State: KETTLE FALLS, WA
Site Spill ID: 6X
Op Unit: 00

3. Purpose**
Lead: [X] SF [ ] PRP [ ] ST [ ] FED [ ] BZ
Early Action: [ ] IA [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI
Long-Term Action: [ ] RIFS [ ] RD [ ] RA [ ] O&M

6. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. PE-water
7. PE-soil
8. Other (specify in Column A)

7. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. CH3OH
7. Other (specify in Column D)
N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX810	5	L	G	5			1	01264050	BK-130-SD	6/25/01 0945	MJ0BN3	KB	—
JX811	5	L	G	5			1	01264051	BK-131-SD	6/25/01 1315	MJ0BN4	KB	—
JX813	5	L	G	5		1	1	01264053	BK-133-SD	6/25/01 1300	MJ0BN6 KB	KB	MS/MSD
JX814	5	L	G	5		1	1	01264054	BK-134-SD	6/25/01 1445	MJ0BN7	KB	—
JX815	5	L	G	5		1	1	01264055	BK-135-SD	6/25/01 1500	MJ0BN8	KB	—
JX819	5	L	G	5			1	01264059	BK-139-SD	6/25/01 1215	MJ0BP2	KB	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
VOA MS/MSD Required? Y/N N Sample #:
BNA MS/MSD Required? Y/N Y Sample #: JX813
Pest/PCB MS/MSD Required? Y/N N Sample #:
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6/26/01 0730				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

ALL GRAB SOIL/SEDIMENT SAMPLES COLLECTED

EPA Form 9110-2 (2/99)
CLASS-99-001

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29469

1. Project Code: TEC-774A	2. Account Code: 01T10P50102D106X	3. Region No.: LA00 10	Sampling Co.: ROY F WESTON	5. Date Shipped: 6/27/01	Carrier: FEDEX
Regional Information: 10		Sampler (Name): KEVIN BROOM		Airbill Number: 8245 2414 7218	
Non-Superfund Program		Sampler Signature: [signature]		6. Ship To: DATACHEM LABORATORIES	
Site Name: COLUMBIA RIVER / LAKE ROOSEVELT		4. Purpose* Lead: [X] SF [ ] PRP [ ] ST [ ] FED; Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD		960 WEST LEVOY DRIVE SALT LAKE CITY, UT 84123 801 266 7700 ATTN: BRENT STEPHENS	
City, State: KETTLE FALLS WA	Site Spill ID: 6X				

7. Matrix (Enter in Column A): 1. Surface Water, 2. Ground Water, 3. Leachate, 4. Field, 5. Soil/Sediment, 6. Oil (High only), 7. Waste (High only), 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl, 2. HNO3, 3. NaOH, 4. H_2SO_4, 5. $K_2CR_2O_7$, 6. Ice only, 7. Other (specify in Column D), N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	J Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank, S = Spike, D = Duplicate, R = Rinsate, PE = Perform Eval., — = Not a QC Sample)
MJOBN3	5	L	G	6		1						01264050	BK-130-SD	6/25/01 0945	JX810	KB	—
MJOBN4	5	L	G	6		1						01264051	BK-131-SD	6/25/01 1315	JX811	KB	—
MJOBN5	1	L	G	2		1						01264052	BK-132-SW	6/25/01 1345	—	KB	—
MJOBN6	5	L	G	6		1						01264053	BK-133-SD	6/25/01 1300	JX813	KB	—
MJOBN7	5	L	G	6		1						01264054	BK-134-SD	6/25/01 1445	JX814	KB	—
MJOBN8	5	L	G	6		1						01264055	BK-135-SD	6/25/01 1500	JX815	KB	—
MJOBP2	5	L	G	6		1						01264059	BK-139-SD	6/25/01 1215	JX819	KB	—
MJOBP1	5	L	G	6		1						01264058	BK-138-SD	6/26/01 1000	JX818	KB	—
MJOBP3	5	L	G	6		1						01264060	BK-140-SD	6/26/01 1230	JX820	KB	—
MJOBP5	5	L	G	6		1						01264062	BK-142-SD	6/26/01 1615	JX822	KB	—

Shipment for Case Complete? (Y/N): Y — Page 1 of 2

Sample(s) to be Used for Laboratory QC:

Additional Sampler Signatures: [signature]

Chain of Custody Seal Number(s):

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6/26/01 2130				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

ALL GRAB SOIL/SEDIMENT SAMPLES

291062

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29469

1. Project Code: TEC-774A	2. Region No.: 10	Sampling Co.: ROY F WESTON	4. Date Shipped: 6/27/01
Carrier: FEDEX			
Account Code: 01T10P50102D106XLA00	Sampler (Name): KEVIN BROOM	Airbill Number: 8245 2414 7192	
Site Name: COLUMBIA RIVER / LAKE ROOSEVELT	Sampler Signature: [signature]	5. Ship To: MITKEM CORPORATION 175 METRO CENTER BOULEVARD WARWICK, RI 02886 401 732 3400 ATTN: AGNES NG	
City, State: KETTLE FALLS, WA	Site Spill ID: 6X	Op Unit: 00	

3. Purpose**: Lead: [x] SF [ ] PRP [ ] ST [ ] FED [ ] BZ; Early Action: [ ] IA [ ] PA [ ] REM [ ] RI [ ] SI [x] ESI; Long-Term Action: [ ] RIFS [ ] RD [ ] RA [ ] O&M

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. PE-water 7. PE-soil 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. CH3OH 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX818	5	L	G	5			1	01264058	BK.138.SD	6/26/01 1000	MJOBP1	KB	—
JX820	5	L	G	5			1	01264060	BK.140.SD	6/26/01 1230	MJOBP3	KB	—
JX822	5	L	G	5			1	01264062	BK.142.SD	6/26/01 1615	MJOBP5	KB	—

Shipment for Case Complete? (Y/N) Y

Page 1 of 1

VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #:

Additional Sampler Signatures: [signature]

Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6/26/01 2200				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

ALL GRAB SOIL/SEDIMENT SAMPLES

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

291023

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29469

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D106XLA00	10	ROY F. WESTON	6/27/01	FED EX

Regional Information: 10
Sampler (Name): KEVIN BROOM
Airbill Number: 8245 2414 7218
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: DATACHEM LABORATORIES
960 WEST LEVOY DRIVE
SALT LAKE CITY, UT 84123
801 266 7700
ATTN: BRENT STEPHENS

Site Name: COLUMBIA RIVER/LAKE ROOSEVELT
City, State: KETTLE FALLS, WA
Site Spill ID: 6X

4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MJOBP4	1	L	G	6		1						01264061	BK-141-SW	6/26/01 1245	—	KS	—
MJOBP6	1	L	G	6		1						01264063	BK-143-SW	6/26/01 1600	—	KS	—

Shipment for Case Complete? (Y/N) Y
Page 2 of 2
Sample(s) to be Used for Laboratory QC
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s):

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6/26/01 2130				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

391060

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29469

1. Project Code: TEC-774A
2. Region No.: 10
Sampling Co.: ROY F WESTON
4. Date Shipped: 6/28/01
Carrier: FEDEX

Account Code: 01T10P50102D106XLA00
Sampler (Name): KEVIN BROOM
Airbill Number: 8245 1981 8601

Site Name: COLUMBIA RIVER/ LAKE ROOSEVELT
Sampler Signature:
5. Ship To: MITKEM CORPORATION
175 METRO CENTER BOULEVARD
WARWICK, RI 02886
401 732 3400
ATTN: AGNES NG

City, State: KETTLE FALLS, WA
Site Spill ID: 6X
Op Unit: 00

3. Purpose**
Lead: ~~SF~~ PRP ST FED BZ
Early Action: IA PA REM RI ~~SI~~ ESI
Long-Term Action: RIFS RD RA O&M

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. PE-water 7. PE-soil 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. CH3OH 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other: RINSATE	B Conc.: Low Med	C Sample Type: Comp./ Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX827	5	L	G	5			1	01264068	BK·150·SD	6/27/01 0900	MJ0BQ1	KB	—
JX816	5	L	G	5			1	01264056	TR·136 SD	6/27/01 1430	MJ0BN9	KB	MS/MSD
13 JX839	5	L	G	5			1	01264064	TR·145 SD	6/27/01 1515	MJ0BQ8	KB	—
JX825	5	L	G	5			1	01264065	TR·147 SD	6/27/01 1630	MJ0BP8	KB	—
JX830	8	L	G	5			1	01264071	R·004·SD	6/27/01 0700	MJ0BQ4	KB	R

Shipment for Case Complete? (Y/N): Y
Page 1 of 1

VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #: JX816

Additional Sampler Signatures:
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	6/27/01 2300				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

ALL GRAB SOIL/SEDIMENT SAMPLES COLLECTED 4" BELOW BROWN SURFACE

EPA Form 9110-2 (2/99)
CLASS-99-001

291024

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29469

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D106XLA00	10	ROY F. WESTON	6/29/01	FED EX

Regional Information: 10
Sampler (Name): KEVIN BROOM
Airbill Number: 8245 1981 8597
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: DATACHEM LABORATORIES, 960 WEST LEVOY DRIVE, SALT LAKE CITY, UT 84123, 801 266 7700
ATTN: BRENT STEPHENS
Site Name: COLUMBIA RIVER / LAKE ROOSEVELT
City, State: KETTLE FALLS, WA
Site Spill ID: 6X
4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SL [X] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MJOBQ1	5	L	G	6		1						01264068	BK·150·SD	6/27/01 0900	JX827	KB	—
MJOBQ2	1	L	G	2		1						01264069	BK·151·SW	6/27/01 0930	—	KB	—
MJOBN9	5	L	G	6		1						01264056	TR·136·SD	6/27/01 1430	JX816	KB	MS/MSD
MJOBQ8	5	L	G	6		1						01264072	TR·145·SD	6/27/01 1515	JX8303	KB	—
MJOBP8	5	L	G	6		1						01264065	TR·147·SD	6/27/01 1630	JX825	KB	—
MJOBP9	1	L	G	2		1						01264066	TR·148·SW	6/27/01 1645	—	KB	—
MJOBQ4	8	L	G	2		1						01264071	R·004·SD	6/27/01 0700	JX830	KB	R
MJOBQ3	5	L	G	6		1						01264070	BK·152·SD	6/28/01 0930	JX829	KB	—
MJOBQ0	1	L	G	2		1						01264067	BK·149·SW	6/28/01 0945	—	KB	—
MJOBQ6	1	L	G	2		1						01264074	BK·154·SW	6/28/01 1055	—	KB	—

Shipment for Case Complete? (Y/N): Y
Page 1 of 2
Sample(s) to be Used for Laboratory QC: MJOBN9
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s):

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6/28/01 2305				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

ALL GRAB SOIL SEDIMENT SAMPLES COLLECTED

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

A21-012-13 REV

391064

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29469

1. Project Code: TEC-774A	2. Account Code: 01T10P50102D106XLA00	3. Region No.: 10	Sampling Co.: ROY F. WESTON	5. Date Shipped: 6/29/01	Carrier: FEDEX
Regional Information: 10		Sampler (Name): KEVIN BLOOM		Airbill Number: 8245 1981 8597	
Non-Superfund Program		Sampler Signature: [signature]		6. Ship To: DATACHEM LABORATORIES	
Site Name: COLUMBIA RIVER/ LAKE ROOSEVELT		4. Purpose*: Lead ☑ SF ☐ PRP ☐ ST. ☐ FED; Early Action ☐ CLEM ☐ PA ☐ REM ☐ RI ☐ SI ☑ ESI; Long-Term Action ☐ FS ☐ RD ☐ RA ☐ O&M ☐ NPLD		960 WEST LEVOY DRIVE SALT LAKE CITY, UT 84123 801 266 7700 ATTN: BRENT STEPHENS	
City, State: KETTLE FALLS, WA	Site Spill ID: 6X				

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only NO_2/NO_3	Fluoride	High Only pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank, S = Spike, D = Duplicate, R = Rinsate, PE = Perform Eval., — = Not a QC Sample)
MJ0B05	5	L	G	6		1						01264073	BK-153-SD	6/26/01 1045	JX831	KS	—
MJ0B07	5	L	G	6		1						01264075	BK-155-SD	6/28/01 1300	JX832	KS	—

Shipment for Case Complete? (Y/N): Y — Page 2 of 2 — Sample(s) to be Used for Laboratory QC: — Additional Sampler Signatures: [signature] — Chain of Custody Seal Number(s):

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6/28/01 2305				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

391065

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29469

1. Project Code: TEC-774 A
2. Region No.: 10
Sampling Co.: ROY F. WESTON
4. Date Shipped: 6/29/01
Carrier: FEDEX

Account Code: OIT/OP 50102D106XLA00
Sampler (Name): KEVIN BROOM
Airbill Number: 8245 1981 8314

Site Name: COLUMBIA RIVER/ LAKE ROOSEVELT
Sampler Signature:
5. Ship To: MITKEM CORPORATION
175 METRO CENTER BOULEVARD
WARWICK, RI 02886
401 732 3400
ATTN: AGNES NG

City, State: KETTLE FALLS, WA
Site Spill ID: 6X
Op Unit: 00

3. Purpose**
Lead: [x] SF [ ] PRP [ ] ST [ ] FED [ ] BZ
Early Action: [ ] IA [ ] PA [ ] REM [ ] RI [ ] SI [x] ESI
Long-Term Action: [ ] RIFS [ ] RD [ ] RA [ ] O&M

6. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. PE-water
7. PE-soil
8. Other (specify in Column A)

7. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. CH3OH
7. Other (specify in Column D)
N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank, S = Field Spike, D = Field Duplicate, R = Rinsate, PE = Perform Eval.)
JX829	5	L	G	5			1	01264070	BK.152.SD	6/28/01 0930	MJOBQ3	KS	—
JX831	5	L	G	5			1	01264073	BK.153.SD	6/28/01 1045	MJOBQ5	KS	—
JX832	5	L	G	5			1	01264075	BK.155.SD	6/28/01 1300	MJOBQ7	KS	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #:
Additional Sampler Signatures: Ross R. Wilson
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	6/28/01 2300				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)
CLASS-99-001

ALL GRAB SOIL/SEDIMENT SAMPLES COLLECTED BETWEEN 0"-6" BELOW GROUND SURFACE.

201005

nca™
North Creek Analytical, Inc.
Environmental Laboratory Network
www.ncalabs.com

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 (425) 420-9200 FAX 420-9210
East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210
20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: ROY F. WESTON
REPORT TO: PAUL SWIFT
ADDRESS: 190 QUEEN ANNE AVE N, STE 200 SEATTLE, WA 98109
PHONE: 206. 521. 7600 FAX: 206 521 7601
PROJECT NAME: COLUMBIA RIVER / LAKE ROOSEVELT
PROJECT NUMBER: 12644.001.002.0101.00
SAMPLED BY: KEVIN BROOM

INVOICE TO: SAME AS CLIENT
P.O. NUMBER:

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 (STD.) 7 5 4 3 2 1 <1
Petroleum Hydrocarbon Analyses: 5 (STD.) 4 3 2 1 <1
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TOC - EPA Sw 846 9060M	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. 01264050	6/25/01 0945	X	S	1	—	
2. 01264051	6/25/01 1315	X	S	1	—	
3. 01264059	6/25/01 1215	X	S	1	—	
4. 01264060	6/26/01 1230	X	S	1	—	
5. 01264062	6/26/01 1615	X	S	1	—	
6. 01264058	6/26/01 1000	X	S	1	—	
7. 01264068	6/27/01 0900	X	S	1	—	
8. 01264056	6/27/01 1430	X	S	1	MS/MSD	
9. 01264072	6/27/01 1515	X	S	1	—	
10. 01264065	6/27/01 1630	X	S	1	—	
11. 01264070	6/28/01 0930	X	S	1	—	
12. 01264073	6/28/01 1045	X	S	1	—	
13. 01264075	6/28/01 1300	X	S	1	—	
14.						
15.						

RELINQUISHED BY: [signature] DATE: 6/28/01
PRINT NAME: KEVIN BROOM FIRM: WESTON TIME: 2315
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

RELINQUISHED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: AIRBILL # 8245 2414 7229
TEMP:
PAGE 1 OF 1

COC REV 3/99

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 29276
DAS No:
R

Region:	10	Date Shipped:	5/15/2001
Project Code:	TEC-774A	Carrier Name:	FedEx
Account Code:	01T10P50102D106XLA00	Airbill:	824524146900
CERCLIS ID:	WASFN1002171	Shipped to:	Liberty Analytical 501 Madison Avenue Cary NC 27513 (919) 379-4080
Spill ID:			
Site Name/State:	Columbia River/Lake Roosevelt & Tributaries		
Project Leader:	Susan FitzGerald		
Action:	Expanded Site Investigation/RI		
Sampling Co:	Roy F. Weston, Inc.		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
JX425	Municipal Water Supply	/G	BNA (21), PEST (21), VOA (21)	01204100 (1)	CR001SW			–
JX426	Municipal Water Supply	/G	BNA (21), PEST (21), VOA (21)	01204101 (1)	CR002SW			Field Duplicate

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

BNA = CLP TCL Semivolatiles, PEST = CLP TCL Pesticide/PCBs, VOA = CLP TCL Volatiles

TR Number: 10-413203084-051501-0003

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Contract Laboratory Analytical Services Support, 2000 Edmund Halley Dr., Reston, VA. 20191-3436 Phone 703/264-9348 Fax 703/264-9222

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 29276
DAS No:

R

Region:	10	Date Shipped:	5/15/2001
Project Code:	TEC-774A	Carrier Name:	FedEx
Account Code:	01T10P50102D106XLA00	Airbill:	824524146895
CERCLIS ID:	WASFN1002171	Shipped to:	Sentinel Inc. 116 Washington Street, NE Huntsville AL 35801 (256) 534-9800
Spill ID:			
Site Name/State:	Columbia River Inorganics/WA		
Project Leader:	Susan FitzGerald		
Action:	Expanded Site Investigation/RI		
Sampling Co:	Roy F. Weston, Inc.		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1			
2			
3			
4			

Sampler Signature:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MJ08Y2	Municipal Water Supply	/G	TM (21)	01204100 (1)	CR001SW			–
MJ08Y3	Municipal Water Supply	/G	TM (21)	01204101 (1)	CR002SW			Field Duplicate
MJ08Y4	Municipal Water Supply	/G	TM (21)	01204102 (1)	CR003SW			–
MJ08Y5	Municipal Water Supply	/G	TM (21)	01204108 (1)	RS001SW			Rinsate
~~MJ09E0~~	~~Sediment~~	~~/G~~	~~TM (21)~~	~~01204109 (1)~~	~~RS001SD~~			~~Rinsate~~

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TM = CLP TAL Total Metals

TR Number: 10-413203084-051501-0004

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Contract Laboratory Analytical Services Support, 2000 Edmund Halley Dr., Reston, VA. 20191-3436 Phone 703/264-9348 Fax 703/264-9222

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10 | Sampling Co.: RF Weston
4. Date Shipped: 5/16/01 | Carrier: Fedex
Account Code: 01T10P50102D106XLA00
Sampler (Name): Heather Williams
Airbill Number: 8245 2414 6910
Site Name: Columbia River/ Lake Roosevelt
Sampler Signature: Heath Williams
5. Ship To: Liberty Analytical, 501 Madison Ave, Cary, NC 27513, (919) 379-4100, ATTN: Alice Evans
City, State: Kettle WA | Site Spill ID: 6X | Op Unit: 00

3. Purpose**: Lead: SF, PRP, ST, FED, BZ; Early Action: IA, PA, REM, RI, SI, RSI; Long-Term Action: RIFS, RD, RA, O&M

6. Matrix (Enter in Column A): 1. Surface Water, 2. Ground Water, 3. Leachate, 4. Field QC, 5. Soil/Sediment, 6. PE-water, 7. PE-soil, 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl, 2. HNO3, 3. NaHSO4, 4. H2SO4, 5. Ice only, 6. CH3OH, 7. Other (specify in Column D), N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./ Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/ PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX428	SW	L	G	5	2	1	1	01204103	RS-001-SW	5/15/01 1120	MJ08Y5	HW	R
JX427	SW	L	G	5	2	—	—	01204102	CR-003-SW	5/15/01 1130	MJ08Y4	HW	—
JX429	SD	L	G	5	—	—	1	01204104	CR-001-SD	5/14/01 1900	MJ08Y6	HW	—
~~JX430~~	~~SD~~	~~L~~	~~G~~	~~5~~	~~—~~	~~—~~	~~1~~	~~01204105~~	~~CR-002-SD~~	~~5/14/01 1905~~	~~MJ08Y7~~	~~HW~~	~~D~~
JX431	SD	L	G	5	—	—	1	01204106	CR-003-SD	5/14/01 1800	MJ08Y8	HW	—
JX432	SD	L	G	5	—	—	1	01204107	CR-004-SD	5/15/01 1300	MJ08Y9	HW	—

Shipment for Case Complete? (Y/N): Y | Page 1 of 2
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #:
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Heath Williams	5/16/01 1200				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391002

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10 Sampling Co.: RF Weston
4. Date Shipped: 5/16/01 Carrier: Fedex
Account Code: 01T10P50102D106XLA00
Sampler (Name): Heather Williams
Airbill Number: 8245 2414 6910
Site Name: Columbia River/ Lake Roosevelt
Sampler Signature: Heather Williams
5. Ship To: Liberty Analytical, 501 Madison Ave, Cary, NC 27513, (919) 379-4100, ATTN: Alice Evans
City, State: Kettle Falls, WA
Site Spill ID: 6X
Op Unit: 00

3. Purpose**: Lead [X] SF [ ] PRP [ ] ST [ ] FED [ ] BZ; Early Action [ ] IA [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] RIFS [ ] RD [ ] RA [ ] O&M

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. PE-water 7. PE-soil 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. CH3OH 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./ Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/ PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX427	SW	L	G	5	—	2	2	0204102	CR-003-SW	5/15/01 1130	MJ08X4	HW	—

Shipment for Case Complete? (Y/N): N
Page 2 of 2
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #:
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Heather Williams	5/16/01 1200				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391003

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10
Sampling Co.: Roy F Weston
4. Date Shipped: 5/18/01
Carrier: Fedex

Account Code: OT 01T10P50102D106XLA00
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 6921

Site Name: Columbia River/ Lake Roosevelt
Sampler Signature:
5. Ship To: Liberty Analytical, 501 Madison Ave, Cary, NC 27513, (919) 379-4100, ATTN: Alice Evans

City, State: Kettle Falls, WA
Site Spill ID: 6X
Op Unit: 00

3. Purpose**: Lead [X] SF [ ] PRP [ ] ST [ ] FED [ ] BZ; Early Action [ ] IA [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] RIFS [ ] RD [ ] RA [ ] O&M

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. PE-water 7. PE-soil 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. CH3OH 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./ Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/ PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX433	5	L	G	5			I	01204110	CR-005-SD	5/17/01 1000	MJ08Z0	SMF	—
JX434	5	L	G	5			I	01204111	CR-006-SD	5/17/01 1045	MJ08Z1	SMF	—
JX435	5	L	G	5			I	01204112	CR-007-SD	5/17/01 1130	MJ08Z2	SMF	—
JX436	5	L	G	5			I	01204113	CR-008-SD	5/17/01 1230	MJ08Z3	SMF	—
JX437	5	L	G	5			I	01204114	CR-009-SD	5/17/01 1415	MJ08Z4	SMF	—
JX438	5	L	G	5			I	01204115	CR-010-SD	5/17/01 1445	MJ08Z5	SMF	—
JX439	5	L	G	5			I	01204116	CR-011-SD	5/17/01 1600	MJ08Z6	SMF	—
JX440	5	L	G	5			I	01204117	CR-012-SD	5/17/01 1700	MJ08Z7	SMF	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #:
Additional Sampler Signatures
Chain of Custody Seal Number(s)

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5/17/01 20:30				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391006

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10
Sampling Co.: Roy F Weston
4. Date Shipped: 5/21/01
Carrier: Fedex

Account Code: 01T1OP50102D106XLA00
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 6943

Site Name: Columbia River/ Lake Roosevelt
Sampler Signature:
5. Ship To: Liberty Analytical, 501 Madison Ave, Cary, NC 27513, (919) 379-4100
ATTN: Alice Evans

City, State: Kettle Falls, WA
Site Spill ID: 6X
Op Unit: 00

3. Purpose**
Lead: [X] S, [ ] PRP, [ ] ST, [ ] FED, [ ] BZ
Early Action: [ ] IA, [ ] PA, [ ] REM, [ ] RI, [ ] SI, [X] GSI
Long-Term Action: [ ] RIFS, [ ] RD, [ ] RA, [ ] O&M

6. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. PE-water
7. PE-soil
8. Other (specify in Column A)

7. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. CH3OH
7. Other (specify in Column D)
N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./ Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/ PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX441	5	L	G	5			1	01204118	CR.013.SD	5/18/01 1030	MJ0878	SMF	—
JX442	5	L	G	5			1	01204119	CR.014.SD	5/18/01 1100	MJ0879	SMF	—
JX443	5	L	G	5			1	01204120	CR.015.SD	5/18/01 1230	MJ0900	SMF	MS/MSD
JX444	5	L	G	5			1	01204121	CR.016.SD	5/18/01 1330	MJ0901	SMF	—
JX445	5	L	G	5			1	01204122	CR.017.SD	5/18/01 1430	MJ0902	SMF	—
JX446	5	L	G	5			1	01204123	CR.018.SD	5/18/01 1530	MJ0903	SMF	—
JX550	5	L	G	5			1	01204124	CR.066.SD	5/18/01 1545	MJ0952	SMF	—
JX447	5	L	G	5			1	01204125	CR.019.SD	5/19/01 900	MJ0904	SMF	—
JX448	5	L	G	5			1	01204126	CR.020.SD	5/19/01 1015	MJ0905	SMF	—
JX451	5	L	G	5			1	01204127	CR.023.SD	5/19/01 1130	MJ0908	SMF	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #: JX443
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	5/22/01 21:45				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391008

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D106	10	Roy F. Weston	5/21/01	Fedex

Regional Information	Sampler (Name)	Airbill Number
10	Susan Fitzgerald	8245 2414 6932

Non-Superfund Program	Sampler Signature	6. Ship To:
	[signature]	Sentinel

Site Name	4. Purpose*	
Columbia River/Lake Roosevelt	Lead: [X] SF, [ ] PRP, [ ] ST, [ ] FED; Early Action: [ ] CLEM, [ ] PA, [ ] REM, [ ] RI, [ ] SI, [X] ESI; Long-Term Action: [ ] FS, [ ] RD, [ ] RA, [ ] O&M, [ ] NPLD	116 Washington St., NE, Huntsville, AL 35801, (256) 534-9800
City, State: Kettle Falls, WA; Site Spill ID: 6X		ATTN: Kimberly Hayes

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval — = Not a QC Sample)
MJ08Z0	5	L	G	6	X	1						01204110	CR-005-SD	5/17/01 1000	JX433	SMF	—
MJ08Z1	5	L	G	6		1						01204111	CR-006-SD	5/17/01 1045	JX434	SMF	—
MJ08Z2	5	L	G	6		1						01204112	CR-007-SD	5/17/01 1130	JX435	SMF	—
MJ08Z3	5	L	G	6		1						01204113	CR-008-SD	5/17/01 1330	JX436	SMF	—
MJ08Z4	5	L	G	6		1						01204114	CR-009-SD	5/17/01 1415	JX437	SMF	—
MJ08Z5	5	L	G	6		1						01204115	CR-010-SD	5/17/01 1445	JX438	SMF	—
MJ08Z6	5	L	G	6		1						01204116	CR-011-SD	5/17/01 1600	JX439	SMF	—
MJ08Z7	5	L	G	6		1						01204117	CR-012-SD	5/17/01 1700	JX440	SMF	—
MJ08Y6	5	L	G	6		1						01204104	CR-001-SD	5/14/01 1900	JX429	SMF	—
MJ08Y8	5	L	G	6		1						01204106	CR-003-SD	5/14/01 1800	JX431	SMF	—

Shipment for Case Complete? (Y/N)	Page	Sample(s) to be Used for Laboratory QC	Additional Sampler Signatures	Chain of Custody Seal Number(s)
N	1 of 3	MJ0900	[signature] / Heath Wilcox	

should be 1230

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5-20-01 21:45				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392282

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D106XA00	10	Roy F Weston	5/21/01	Fedex

Regional Information: 10
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 6932
Non-Superfund Program: Columbia River/Lake Roosevelt
Sampler Signature: [signature]
6. Ship To: Sentinel
116 Washington St NE
Huntsville, AL 35801
(256) 534-9800
ATTN: Kimberly Hayes
Site Name: Columbia River/Lake Roosevelt
City, State: Kettle Falls, WA
Site Spill ID: 6X

4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED
Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI
Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MJ08Y9	5	L	G	6		1						01204107	CR.004.SD	5/15/01 1300	JX432	SMF	—
MJ08Z8	5	L	G	6		1						01204118	CR.013.SD	5/18/01 1030	JX441	SMF	—
MJ08Z9	5	L	G	6		1						01204119	CR.014.SD	5/18/01 1100	JX442	SMF	—
MJ0900	5	L	G	6		1						01204120	CR.015.SD	5/18/01 1230	JX443	SMF	MS/MSD
MJ0901	5	L	G	6		1						01204121	CR.016.SD	5/18/01 1330	JX444	SMF	—
MJ0902	5	L	G	6		1						01204122	CR.017.SD	5/18/01 1430	JX445	SMF	—
MJ0903	5	L	G	6		1						01204123	CR.018.SD	5/18/01 1530	JX446	SMF	—
MJ09E2	5	L	G	6		1						01204124	CR.066.SD	5/18/01 1545	JX550	SMF	—
MJ0904	5	L	G	6		1						01204125	CR.019.SD	5/19/01 900	JX447	SMF	—
MJ0905	5	L	G	6		1						01204126	CR.020.SD	5/19/01 1045	JX448	SMF	—

Shipment for Case Complete? (Y/N): N
Page 2 of 3
Sample(s) to be Used for Laboratory QC: MJ0900
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s):

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5-20-01 21:45				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392283

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D106X4A00	10	Roy F Weston	5/21/01	Fedex

Regional Information: 10
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 6932
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: Sentinel
Site Name: Columbia River/Lake Roosevelt
City, State: Kettle Falls, WA
Site Spill ID: 6X
4. Purpose*: Lead [X] BF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD
1/6 Washington St. NE
Huntsville, AL 35801
(256) 534-9800
ATTN: Kimberly Hayes

7. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (specify in Column A)

8. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaOH
4. H_2SO_4
5. $K_2CR_2O_7$
6. Ice only
7. Other (specify in Column D)
N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MJ0908	5	L	G	6		1						01204127	CR.023.SD	5/19/01 1130	JX451	SMF	—

Shipment for Case Complete? (Y/N)	Page	Sample(s) to be Used for Laboratory QC	Additional Sampler Signatures	Chain of Custody Seal Number(s)
N	3 of 3	MJ0900	[signature]	

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5-20-01 21:45				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392284

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10
Sampling Co.: Ray F Weston
4. Date Shipped: 5/21/01
Carrier: Fedex

Account Code: 01T10P50102D106XLA00
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 6954

Site Name: Columbia River/ Lake Roosevelt
Sampler Signature:
5. Ship To: Liberty Analytical, 501 Madison Ave, Cary, NC 27513, (919) 379-4100
ATTN: Alice Evans

City, State: Kettle Falls, WA
Site Spill ID: 6X
Op Unit: 00

3. Purpose**: Lead: SP, PRP, ST, FED, BZ; Early Action: IA, PA, REM, RI, SI, EI; Long-Term Action: RIFS, RD, RA, O&M

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. PE-water 7. PE-soil 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. CH3OH 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./ Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/ PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
~~JX449~~	~~5~~	~~L~~	~~G~~	~~5~~			~~1~~	~~0121410~~	~~RS 002 SD~~	~~5/21/01 1040~~	~~MJ0906~~	~~SMF~~	~~R~~
JX450	5	L	G	5			1	0121402	CR.022SD	5/21/01 1030	MJ0907	SMF	—
JX452	5	L	G	5			1	0121404	CR.024SD	5/21/01 1050	MJ0909	SMF	—
JX453	5	L	G	5			1	0121406	CR.025SD	5/21/01 1200	MJ0910	SMF	—
JX454	5	L	G	5 DW			1	0121408	CR.026SD	5/21/01 1245	MJ0911	SMF	—
JX455	5	L	G	5			1	0121410	CR.027SD	5/21/01 1330	MJ0912	SMF	—
JX457	5	L	G	5			1	0121414	CR.029SD	5/21/01 1415	MJ0914	SMF	—
JX456	5	L	G	5			1	0121412	CR.028SD	5/21/01 1445	MJ0913	SMF	—
JX458	5	L	G	5			1	0121416	CR.030SD	5/21/01 1545	MJ0915	SMF	—
JX459	5	L	G	5			1	0121418	CR.031SD	5/21/01 1645	MJ0916	SMF	—

SMF

Shipment for Case Complete? (Y/N): Y
Page 1 of 2
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #:
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	5-21-01 2115				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391007

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10
Sampling Co.: Roy F. Weston
4. Date Shipped: 5/22/01
Carrier: Fedex
Account Code: 01T10P50102D106X1A00
Sampler (Name): Susan Fitzgerald
Airbill Number: 8245 2414 ~~6954~~ 6954
Site Name: Columbia River / Lake Roosevelt
Sampler Signature:
5. Ship To: Liberty Analytical, 501 Madison Ave, Cary, NC 27513, (919) 379-4100, ATTN: Alice Evans
City, State: Kettle Falls, WA
Site Spill ID: 6X
Op Unit: 00

3. Purpose**
Lead: [X] SF [ ] PRP [ ] ST [ ] FED [ ] BZ
Early Action: [ ] IA [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI
Long-Term Action: [ ] RIFS [ ] RD [ ] RA [ ] O&M

6. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. PE-water
7. PE-soil
8. Other (specify in Column A)

7. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. CH3OH
7. Other (specify in Column D)
N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank, S = Field Spike, D = Field Duplicate, R = Rinsate, PE = Perform Eval.)
JX460	5	L	G	5			1	0121420	CR.032.SD	5/21/01 1800	MJ0917	SAF	—

Shipment for Case Complete? (Y/N)
Page 2 of 2
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #:
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	5/21/01 2115				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391009

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10 | Sampling Co.: Ray F Weston
4. Date Shipped: 5/23/01 | Carrier: Fedex
Account Code: 01T10P50102D106XLA00
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 7365
Site Name: Columbia River/ Lake Roosevelt
Sampler Signature: [signature]
5. Ship To: Liberty Analytical, 501 Madison Ave, Cary, NC 27513, (919) 379-4100, ATTN: Alice Evans
City, State: Kettle Falls, WA | Site Spill ID: 10X | Op Unit: 00
3. Purpose**: Lead [X] SF [ ] PRP [ ] ST [ ] FED [ ] BZ; Early Action [ ] IA [ ] PA [ ] REM [ ] RI [ ] SI [X] SSI; Long-Term Action [ ] RIFS [ ] RD [ ] RA [ ] O&M

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. PE-water 7. PE-soil 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. CH3OH 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./ Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/ PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX461	5	L	G	5			1	01214122	CR-033-SD	5/22/01 10:00	MJ0918	SMF	—
JX462	5	L	G	5			1	01214124	CR-034-SD	5/22/01 1100	MJ0919	SMF	—
JX463	5	L	G	5			1	01214126	CR-035-SD	5/22/01 1200	MJ0920	SMF	MS/MSD
JX464	5	L	G	5			1	01214128	CR-036-SD	5/22/01 1400	MJ0921	SMF	
JX465	5	L	G	5			1	01214130	CR-037-SD	5/22/01 1500	MJ0922	SMF	—
JX466	5	L	G	5			1	01214132	CR-038-SD	5/22/01 1630	MJ0923	SMF	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #: JX463
Additional Sampler Signatures: Heath Wing
Chain of Custody Seal Number(s)

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5-22-01 2215				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391010

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10 | Sampling Co.: Roy F Weston
4. Date Shipped: 5/24/01 | Carrier: Fedex
Account Code: 01T10P50102D106XLA00
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 7354
Site Name: Columbia River/ Lake Roosevelt
Sampler Signature:
5. Ship To: Liberty Analytical, ~~Attn:~~ 501 Madison Ave, Cary, NC 27513, (919) 379-4100, ATTN: Alice Evans
City, State: Kettle Falls, WA | Site Spill ID: 6X | Op Unit: 00
3. Purpose**: Lead [X] SF, [ ] PRP, [ ] ST, [ ] FED, [ ] BZ; Early Action [ ] IA, [ ] PA, [ ] REM, [ ] RI, [ ] SI, [X] SSI; Long-Term Action [ ] RIFS, [ ] RD, [ ] RA, [ ] O&M

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. PE-water 7. PE-soil 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. CH3OH 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX467	5	L	G	5			/	01214134	CR-039-SD	5/23/01 1015	MJ0924	SWF	—
JX468	5	L	G	5			/	01214136	CR-040-SD	5/23/01 1130	MJ0925	SWF	—
JX469	5	L	G	5			/	01214138	CR-041-SD	5/23/01 1245	MJ0926	SWF	—
JX470	5	L	G	5			/	01214140	CR-042-SD	5/23/01 1330	MJ0927	SWF	—
JX471	5	L	G	5			/	01214142	CR-043-SD	5/23/01 1400	MJ0928	SWF	—
JX472	5	L	G	5			/	01214144	CR-044-SD	5/23/01 1515	MJ0929	SWF	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #:
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	5-24-01 0752				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391011

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10PS0102D06X A00	10	Roy F. Weston	5/25/01	Fedex

Regional Information: 10
Sampler (Name): Susan Fitzgerald
Airbill Number: 8245 2414 6976
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: Sentinel
Site Name: Columbia River/Lake Roosevelt
City, State
Site Spill ID
4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD
116 Washington St. NE
Huntsville, AL ~~8~~ 35801
(256) 534-9800
ATTN: Kimberly Hayes

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MJ0974	5	L	G	6		1						01214141	TR.024.SD	5/24/01 1325	—	[initials]	—
MJ0975	5	L	G	6		1						01214143	TR.025.SD	5/24/01 1145	—	[initials]	—
MJ0967	5	L	G	6		1						01214127	TR.017.SD	5/24/01 1215	—	[initials]	—
MJ0969	5	L	G	6		1						01214131	TR.018.SD	5/24/01 1300	—	[initials]	—
MJ0970	5	L	G	6		1						01214133	TR.019.SD	5/24/01 1345	—	[initials]	—
MJ0971	5	L	G	6		1						01214135	TR.020.SD	5/24/01 1615	—	[initials]	MS/MSD

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC: ~~MJ0920, MJ0906~~ MJ0971
Additional Sampler Signatures: [signature] Heath Wing [signature]
Chain of Custody Seal Number(s)

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5-24-01 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

A21-012-13 REV

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392288

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10950102D106XR000	10	Roy F Weston	5/25/01	Fedex

Regional Information: 10

Sampler (Name): Susan FitzGerald

Airbill Number: 8245 2414 7332

Non-Superfund Program

Sampler Signature:

6. Ship To: Sentinel, 116 Washington St. NE, Huntsville, AL 35801, (256) 534-9800, ATTN: Kimberly Hayes

Site Name: Columbia River/Lake Roosevelt

City, State: Kettle Falls, WA

Site Spill ID: 6X

4. Purpose*: Lead: SF, PRP, ST, FED; Early Action: CLEM, PA, REM, RI, SI, CSI; Long-Term Action: FS, RD, RA, O&M, NPLD

7. Matrix (Enter in Column A): 1. Surface Water, 2. Ground Water, 3. Leachate, 4. Field, 5. Soil/Sediment, 6. Oil (High only), 7. Waste (High only), 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl, 2. HNO3, 3. NaOH, 4. H_2SO_4, 5. $K_2CR_2O_7$, 6. Ice only, 7. Other (specify in Column D), N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval — = Not a QC Sample)
MJ0929	5	L	G	6		1						01214144	CR.044.SD	5/23/01 1555	JX472	SM	—
MJ0968	5	L	G	6		1						01214129	TR.016.SD	5/23/01 1645	—	SM	—
MJ0959	5	L	G	6		1						01214115	TR.009.SD	5/23/01 1100	—	SM	—
MJ0960	5	L	G	6		1						01214117	TR.010.SD	5/23/01 1220	—	SM	—
MJ0961	5	L	G	6		1						01214119	TR.011.SD	5/23/01 1410	—	SM	—
MJ0962	5	L	G	6		1						01214121	TR.012.SD	5/23/01 1445	—	SM	—
MJ0963	5	L	G	6		1						01214123	TR.013.SD	5/23/01 1555	—	SM	—
MJ0964	5	L	G	6		1						01214125	TR.014.SD	5/23/01 1640	—	SM	—
MJ0972	5	L	G	6		1						01214137	TR.022.SD	5/24/01 1530	—	SM	—
MJ0973	5	L	G	6		1						01214139	TR.023.SD	5/24/01 1435	—	SM	—

Shipment for Case Complete? (Y/N): Y

Page 1 of 1

Sample(s) to be Used for Laboratory QC: MJ0920, MJ0908

Additional Sampler Signatures:

Chain of Custody Seal Number(s):

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	5-24-01 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392297

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D10	XLA00 10	Roy F. Weston	5/25/01	Fedex

Regional Information	Sampler (Name)	Airbill Number
10	Susan FitzGerald	8245 2414 7310

Non-Superfund Program	Sampler Signature	6. Ship To:
	[signature]	Sentinel

Site Name: Columbia River/Lake Roosevelt

City, State: Kettle Falls, WA

Site Spill ID: 6X

4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

ATTN: Kimberly Hayes
116 Washington St. NE
Huntsville, AL 35801
(256) 534-9800

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval — = Not a QC Sample)
MJ0955	5	L	G	6		1						01214107	X TR-004-SD	5/22/01 1455	—	[signature]	—
MJ0956	5	L	G	6		1						01214109	X TR-006-SD	5/22/01 1550	—	[signature]	—
MJ0957	5	L	G	6		1						01214111	X TR-007-SD	5/22/01 1705	—	[signature]	—
MJ0958	5	L	G	6		1						01214113	X TR-008-SD	5/22/01 1735	—	[signature]	—
MJ0953	5	L	G	6		1						01214103	X TR-002-SD	5/22/01 1045	—	[signature]	—
MJ0924	5	L	G	6		1						01214134	CR-039-SD	5/23/01 1015	JX467	[signature]	—
MJ0925	5	L	G	6		1						01214136	CR-040-SD	5/23/01 1130	JX468	[signature]	—
MJ0926	5	L	G	6		1						01214138	CR-041-SD	5/23/01 1245	JX469	[signature]	—
MJ0927	5	L	G	6		1						01214140	CR-042-SD	5/23/01 1330	JX470	[signature]	—
MJ0928	5	L	G	6		1						01214142	CR-043-SD	5/23/01 1400	JX471	[signature]	—

Shipment for Case Complete? (Y/N)	Page	Sample(s) to be Used for Laboratory QC	Additional Sampler Signatures	Chain of Custody Seal Number(s)
Y	1 of 1	MJ0920, MJ0900	[signature]	

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5-24-01 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392287

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D106XLA00	10	Roy F Weston	5/25/01	Fedex

Regional Information: 10
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 7321
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: Sentinel
116 Washington St. NE
Huntsville, AL 35801
(256) 534-9800
ATTN: Kimberly Hayes

Site Name: Columbia River/Lake Roosevelt
City, State: Kettle Falls, WA
Site Spill ID: 6X

4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MJ0952	5	L	G	6		1						01214101	TR-001-SD	5/21/01 1715	—	SMF	—
MJ0917	5	L	G	6		1						01214120	CR-032-SD	5/21/01 1800	JX460	SMF	—
MJ0918	5	L	G	6		1						01214122	CR-033-SD	5/22/01 1000	JX461	SMF	—
MJ0919	5	L	G	6		1						01214124	CR-034-SD	5/22/01 1100	JX462	SMF	—
~~MJ0952~~	~~5~~	~~L~~	~~G~~	~~6~~		~~1~~						~~01214103~~	~~TR-002-SD~~	~~5/22/01 1045~~	—		—
MJ0920	5	L	G	6		1						01214126	CR-035-SD	5/22/01 1200	JX463	SMF	MS/MSD
MJ0921	5	L	G	6		1						01214128	CR-036-SD	5/22/01 1400	JX464	SMF	—
MJ0922	5	L	G	6		1						01214130	CR-037-SD	5/22/01 1500	JX465	SMF	—
MJ0923	5	L	G	6		1						01214132	CR-038-SD	5/22/01 1630	JX466	SMF	—
MJ0954	5	L	G	6		1						01214105	X TR-005-SD	5/22/01 1345	—	SMF	—

Shipment for Case Complete? (Y/N): Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC: MJ0920, ~~MJ0906~~ HW
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s):

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5-24-01 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392285

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D06XWP00	10	Roy F Weston	5/25/01	Fedex

Regional Information: 10
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 7343
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: Sentinel
Site Name: Columbia River/Lake Roosevelt
City, State: Kettle Falls, WA
Site Spill ID: 6X
4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ES; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD
116 Washington St. NE
Huntsville, AL 35801
(256) 534-9800
ATTN: Kimberly Hayes

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)
8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
~~MJ0906~~	~~5~~	~~L~~	~~G~~	~~6~~		~~1~~						~~01214100~~	~~RS.002.SD~~	~~5/21/01 1010~~	~~JX449~~	SMF	~~R~~
MJ0907	5	L	G	6		1						01214102	CR.022.SD	5/21/01 1030	JX450	SMF	—
MJ0909	5	L	G	6		1						01214104	CR.024.SD	5/21/01 1050	JX452	SMF	—
MJ0910	5	L	G	6		1						01214106	CR.025.SD	5/21/01 1200	JX453	SMF	—
MJ0911	5	L	G	6		1						01214108	CR.026.SD	5/21/01 1245	JX454	SMF	—
MJ0912	5	L	G	6		1						01214110	CR.027.SD	5/21/01 1330	JX455	SMF	—
MJ0914	5	L	G	6		1						~~01214114~~ 01214114	CR.029.SD	5/21/01 1415	JX457	SMF	—
MJ0913	5	L	G	6		1						01214112	CR.028.SD	5/21/01 1445	JX456	SMF	—
MJ0915	5	L	G	6		1						01214116	CR.030.SD	5/21/01 1545	JX458	SMF	—
MJ0916	5	L	G	6		1						01214118	CR.031.SD	5/21/01 1645	JX459	SMF	—

Shipment for Case Complete? (Y/N): Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC: MJ0906, ~~MJ0920~~ AW
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s):

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	5-24-01 2106				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

A21-012-13 REV

292296

nca™
North Creek Analytical, Inc.
Environmental Laboratory Network
www.ncalabs.com

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 (425) 420-9200 FAX 420-9210
East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210
20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: Roy F Weston
REPORT TO: Heather Williams
ADDRESS: 190 Queen Anne Ave N, Suite 200
Seattle, WA. 98109
PHONE: (206) 521-7613 FAX: (206) 521-7601

INVOICE TO: SAME as Client
P.O. NUMBER:

PROJECT NAME: Columbia River/Lake Roosevelt
PROJECT NUMBER: 126411.001.002.001.00
SAMPLED BY: Susan FitzGerald

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | <1 (STD.)
Petroleum Hydrocarbon Analyses: 5 | 4 | 3 | 2 | 1 | <1 (STD.)
OTHER — Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TOC EPA SW-846 9060												MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. 01214~~2332~~ 32	5/22/01 1630	X												S	1	—	
2. 01214134	5/23/01 1015	X												S	1	—	
3. 01214136	5/23/01 1130	X												S	1	—	
4. 01214138	5/23/01 1245	X												S	1	—	
5. 01214140	5/23/01 1330	X												S	1	—	
6. 01214142	5/23/01 1400	X												S	1	—	
7. 01214144	5/23/01 1515	X												S	1	—	
8. 01204104	5/14/01 1900	X												S	1	—	
9. 01204106	5/14/01 1800	X												S	1	—	
10. 01204107	5/15/01 1300	X												S	1	—	
11. 01204110	5/17/01 1000	X												S	1	—	
12. 01204111	5/17/01 1045	X												S	1	—	
13. 01204112	5/17/01 1130	X												S	1	—	
14. 01204113	5/17/01 1230	X												S	1	—	
15. 01204114	5/17/01 1415	X												S	1	—	

RELINQUISHED BY: [signature]	DATE: 5-25-01	RECEIVED BY:	DATE:
PRINT NAME: SUSAN FITZGERALD FIRM: ROY F. WESTON	TIME: 0800	PRINT NAME: FIRM:	TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
PRINT NAME: FIRM:	TIME:	PRINT NAME: FIRM:	TIME:

ADDITIONAL REMARKS: Airbill #: 8245 2414 6998

TEMP:

COC REV 3/99

PAGE 1 OF 1

nca™
North Creek Analytical, Inc.
Environmental Laboratory Network
www.ncalabs.com

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 (425) 420-9200 FAX 420-9210
East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210
20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: Ray F Weston
REPORT TO: Heather Williams
ADDRESS: 190 Queen Anne Ave N, Ste 200
Seattle, WA 98109
PHONE: (206) 521-7613 FAX: (206) 521-7601

INVOICE TO: Same as client
P.O. NUMBER:

PROJECT NAME: Columbia River/Lake Roosevelt
PROJECT NUMBER: 12614.001.002.0101.00
SAMPLED BY: Susan FitzGerald

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | <1 (STD.)
Petroleum Hydrocarbon Analyses: 5 | 4 | 3 | 2 | 1 | <1 (STD.)
OTHER — Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES: TCL - GA 3.0 - 8415 Gamma RA

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TCL - GA 3.0 - 8415 Gamma RA	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. 01204115	5/17/01 1445	X	S	1	—	
2. 01204116	5/17/01 1600	X	S	1	—	
3. 01204117	5/17/01 1700	X	S	1	—	
4. 01204118	5/18/01 1030	X	S	1	—	
5. 01204119	5/18/01 1100	X	S	1	—	
6. 01204120	5/18/01 1230	X	S	1	MS/MSD	
7. 01204121	5/18/01 1330	X	S	1	—	
8. 01204122	5/18/01 1430	X	S	1	—	
9. 01204123	5/18/01 1530	X	S	1	—	
10. 01204124	5/18/01 1545	X	S	1	—	
11. 01204125	5/19/01 900	X	S	1	—	
12. 01204126	5/19/01 1045	X	S	1	—	
13. 01204127	5/19/01 1130	X	S	1	—	
14.						
15.						

RELINQUISHED BY: [signature]	DATE: 5/21/01	RECEIVED BY:		DATE:	
PRINT NAME: Susan Fitzgerald	FIRM: [illegible]	TIME: 0800	PRINT NAME:	FIRM:	TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:		DATE:	
PRINT NAME:	FIRM:	TIME:	PRINT NAME:	FIRM:	TIME:

ADDITIONAL REMARKS: Airbill # 8245 2414 7001
TEMP:
COC REV 3/99
PAGE OF

nca™
North Creek Analytical, Inc.
Environmental Laboratory Network
www.ncalabs.com

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 (425) 420-9200 FAX 420-9210
East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210
20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: Ray F Weston
REPORT TO: Heather Williams
ADDRESS: 190 Queen Anne Ave N, Suite 200
Seattle, WA 98109
PHONE: (206) ~~329~~. 521.7613 FAX (206) 521.7601

INVOICE TO: Same As Client
P.O. NUMBER:

PROJECT NAME: Columbia River/Lake Roosevelt
PROJECT NUMBER: ~~512~~ 12644.001.002.010.004
SAMPLED BY: Susan Fitzgerald

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 (STD.) | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 (STD.) | 4 | 3 | 2 | 1 | <1
OTHER — Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TOC-EPA SW-846 9060	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. 0121402	5/21/01 1030	X	S	1	—	
2. 0121404	5/21/01 1050	X	S	1	—	
3. 0121406	5/21/01 1200	X	S	1	—	
4. 0121408	5/21/01 1245	X	S	1	—	
5. 0121410	5/21/01 1330	X	S	1	—	
6. 0121412	5/21/01 1445	X	S	1	—	
7. 0121414	5/21/01 1415	X	S	1	—	
8. 0121416	5/21/01 1545	X	S	1	—	
9. 0121418	5/21/01 1645	X	S	1	—	
10. 0121420	5/~~21~~ 22/01 1800	X	S	1	—	
11. 0121422	5/22/01 1000	X	S	1	—	
12. 0121424	5/22/01 1100	X	S	1	—	
13. 0121426	5/22/01 1200	X	S	1	—	
14. 0121428	5/22/01 1400	X	S	1	—	
15. 0121430	5/22/01 1500	X	S	1	—	

RELINQUISHED BY:	DATE: 5/25/01	RECEIVED BY:	DATE:
PRINT NAME: Susan Fitzgerald FIRM: Ray F Weston	TIME: 0000	PRINT NAME: FIRM:	TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
PRINT NAME: FIRM:	TIME:	PRINT NAME: FIRM:	TIME:

ADDITIONAL REMARKS: Airbill # 8245.2414.6987
TEMP:
COC REV 3/99
PAGE 1 OF 1

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10 | Sampling Co.: Roy F Weston
4. Date Shipped: 6/1/01 | Carrier: Fedex
Account Code: 01T10P50102D106XCA00
Sampler (Name): Susan Fitzgerald
Airbill Number: 8245 2414 7045
Site Name: Columbia River/ Lake Roosevelt
Sampler Signature:
5. Ship To: Liberty Analytical, 501 Madison Ave, Cary, NC 27513, (919) 379-4100, ATTN: Alice Evans
City, State: Kettle Falls, WA | Site Spill ID: 6X | Op Unit: 00
3. Purpose**: Lead: SF, PRP, ST, FED, BZ; Early Action: IA, PA, REM, RI, SI, PSI; Long-Term Action: RIFS, RD, RA, O&M

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. PE-water 7. PE-soil 8. Other (specify in Column A)
7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. CH3OH 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other: Rinsate	B Conc.: Low Med	C Sample Type: Comp./Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX473	5	H	G	5			1	01224150	CR.045.SD	5/31/01 1045	MJ0930	SMF	—
JX474	5	M	G	5			1	01224151	CR.046.SD	5/31/01 1215	MJ0931	SMF	—
JX552	5	L	G	5			1	01224153	TR.026.SD	5/31/01 1345	MJ0976	SMF	MS/MSD
JX475	5	H	G	5			1	01224154	CR.047.SD	5/31/01 1430	MJ0932	SMF	—
JX476	5	H	G	5			1	01224155	CR.048.SD	5/31/01 1515	MJ0933	SMF	—
JX553	5	L	G	5			1	01224156	TR.028.SD	5/31/01 1545	MJ0978	SMF	—
JX477	5	H	G	5			1	01224157	CR.049.SD	5/31/01 1630	MJ0934	SMF	MS/MSD
JX556	8	L	G	5			1	01224158	RS.001.SD	5/31/01 830	MJ0981	SMF	R
JX557	8	L	G	5			1	01224159	RS.002.SD	5/31/01 900	MJ0982	SMF	R

Shipment for Case Complete? (Y/N): Y | Page 1 of 1
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #: JX552/JX477
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	5-31-01 2230				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391012

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10
Sampling Co.: Roy F Weston
4. Date Shipped: 6-2-01
Carrier: Fedex
Account Code: OTT10P50102D106XCA
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 7300
Site Name: Columbia River / Lake Roosevelt
Sampler Signature:
5. Ship To: Liberty Analytical, 501 Madison Ave, Cary, NC 27513, (919) 379-4100, ATTN: Alice Evans
City, State: Kettle Falls, WA
Site Spill ID: 6X
Op Unit: 00

3. Purpose**
Lead: [X] SF [ ] PRP [ ] ST [ ] FED [ ] BZ
Early Action: [ ] IA [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI
Long-Term Action: [ ] RIFS [ ] RD [ ] RA [ ] O&M

6. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. PE-water
7. PE-soil
8. Other (specify in Column A)

7. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. CH3OH
7. Other (specify in Column D)
N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank, S = Field Spike, D = Field Duplicate, R = Rinsate, PE = Perform Eval.)
JX554	5	L	G	5			1	01224161	TR-029-SD	6/1/01 1100	MJ0979	SMF	—
JX555	5	L	G	5			1	01224165	TR-030-SD	6/1/01 1330	MJ0980	SMF	—
JX478	5	H	G	5			1	01224160	CR-050-SD	6/1/01 930	MJ0935	SMF	—
JX479	5	M	G	5			1	01224162	CR-051-SD	6/1/01 1145	MJ0936	SMF	—
JX480	5	H	G	5			1	01224163	CR-052-SD	6/1/01 1230	MJ0937	SMF	—
JX481	5	H	G	5			1	01224164	CR-053-SD	6/1/01 1415	MJ0938	SMF	—
JX559	5	L	G	5			1	01234052	TR-061-SD	6/3/01 1315	MJ0E6	SMF	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #:
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6-3-01 [illegible]				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6-3-01 2100				
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391013

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D106X4A00	10	Roy F Weston	6/4/01	Fedex

Regional Information: 10
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 7067
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: Sentinel
116 Washington St. NE
Huntsville, AL 35801
(256) 534-9800
ATTN: Kimberly Hayes

Site Name: Columbia River/Lake Roosevelt
City, State: Kettle Falls, WA
Site Spill ID: 6X

4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other: rinsate	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other: [illegible]	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MJ0981	8	L	G	2		1						01224158	RS-001-SD	5/31/01 830	JX556	SWF	R
MJ0982	8	L	G	2		1						01224159	RS-002-SD	5/31/01 900	JX557	SWF	R
MJ0930	5	H	G	6		1						01224150	CR-045-SD	5/31/01 1045	JX473	SWF	—
MJ0931	5	M	G	6		1						01224151	CR-046-SD	5/31/01 1215	JX474	SWF	—
MJ0977	5	L	G	6		1						01224152	TR-027-SD	5/31/01 1300	—	SWF	—
MJ0976	5	L	G	6		1						01224153	TR-026-SD	5/31/01 1345	JX552	SWF	MS/MSD
MJ0932	5	H	G	6		1						01224154	CR-047-SD	5/31/01 1430	JX475	SWF	—
MJ0933	5	H	G	6		1						01224155	CR-048-SD	5/31/01 1515	JX476	SWF	—
MJ0978	5	L	G	6		1						01224156	TR-028-SD	5/31/01 1545	JX553	SWF	—
MJ0934	5	H	G	6		1						01224157	CR-049-SD	5/31/01 1630	JX477	SWF	MS/MSD

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC: MJ0981, MJ0982, MJ0976, MJ0934
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s)

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6-3-01 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392086

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D106XLA00	10	Roy F Weston	6/4/01	Fedex

Regional Information: 10
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 7295
Non-Superfund Program
Sampler Signature
6. Ship To: Sentinel
116 Washington St. NE
Huntsville, AL 35801
(256) 534-9800
ATTN: Kimberly Hayes

Site Name: Columbia River / Lake Roosevelt
City, State: Kettle Falls, WA
Site Spill ID: 6X

4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] BSI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MJ09E6	5	L	G	6		1						01234052	TR.061.SD	6/3/01 1315	JX559	SWF	—
MJ09E4	5	L	G	6		1						01234053	TR.058.SD	6/3/01 1500	—	SWF	—
MJ09F0	5	L	G	6		1						01234051	TR.068.SD	6/3/01 ~~1035~~ 1045 JB	—	SWF	—
MJ09F2	5	L	G	6		1						01234050	TR.070.SD	6/3/01 935	—	SWF	—
~~MJ09HW~~						HW											
MJ09G1	5	L	G	6		1						01234063	TR.088.SD	6/3/01 1450	—	SWF	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC
Additional Sampler Signatures
Chain of Custody Seal Number(s)

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6-3-01 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392291

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D106X4A00	10	Roy F Weston	6/4/01	Fedex

Regional Information: 10
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 7078
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: Sentinel
116 Washington St. NE
Huntsville, AL 35801
(256) 534.9800
ATTN: Kimberly Hayes

Site Name: Columbia River / Lake Roosevelt
City, State: Kettle Falls, WA
Site Spill ID: 6X

4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] BSI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MJ0935	5	H	G	6		1						01224160	CR.050.SD	6/1/01 930	JX478	SMF	—
MJ0979	5	L	G	6		1						01224161	TR.029.SD	6/1/01 1100	JX554	SMF	—
MJ0936	5	M	G	6		1						01224162	CR.051.SD	6/1/01 1145	JX479	SMF	—
MJ0937	5	H	G	6		1						01224163	CR.052.SD	6/1/01 1230	JX480	SMF	—
MJ0938	5	H	G	6		1						01224164	CR.053.SD	6/1/01 1415	JX481	SMF	—
MJ0980	5	L	G	6		1						01224165	TR.030.SD	6/1/01 1330	JX555	SMF	—
MJ09F4	5	L	G	6		1						01234059	TR.075.SD	6/3/01 1030	—	SMF	—
MJ09F5	5	L	G	6		1						01234060	TR.076.SD	6/3/01 1100	—	SMF	—
MJ09F6	5	L	G	6		1						01234061	TR.081.SD	6/3/01 1300	—	SMF	—
MJ09F9	5	L	G	6		1						01234062	TR.084.SD	6/3/01 1345	—	SMF	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC
Additional Sampler Signatures: Heath Wyss [signature]
Chain of Custody Seal Number(s)

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6-3-01 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392290

A21-012-13 REV

nca™
North Creek Analytical, Inc.
Environmental Laboratory Network
www.ncalabs.com

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 (425) 420-9200 FAX 420-9210
East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210
20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: Roy F Weston
REPORT TO: ~~Hetto~~ Paul Swift
ADDRESS: 190 Queen Anne Ave N, Suite 200
Seattle, WA 98109
PHONE: (206) 521-7600 FAX: (206) 521-7601
PROJECT NAME: Columbia River/Lake Roosevelt
PROJECT NUMBER: 12644.001.002.0101.00
SAMPLED BY: Susan FitzGerald

INVOICE TO: Same as client
P.O. NUMBER:

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 (STD.) | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 (STD.) | 4 | 3 | 2 | 1 | <1
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TOC-EPA SW-846 9060M													MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. 01224150	5/31/01 1045	X													S	1	—	
2. 01224151	5/31/01 1215	X													S	1	—	
3. 01224153	5/31/01 1345	X													S	1	MS/MSD	
4. 01224154	5/31/01 1430	X													S	1	—	
5. 01224155	5/31/01 1515	X													S	1	—	
6. 01224156	5/31/01 1545	X													S	1	—	
7. 01224157	5/31/01 1630	X													S	1	MS/MSD	
8. 01224160	6/1/01 930	X													S	1	—	
9. 01224161	6/1/01 1100	X													S	1	—	
10. 01224162	6/1/01 1145	X													S	1	—	
11. 01224163	6/1/01 1230	X													S	1	—	
12. 01224164	6/1/01 1415	X													S	1	—	
13. 01224165	6/1/01 1330	X													S	1	—	
14. 01234052	6/3/01 1315	X													S	1	—	
15.															S			

RELINQUISHED BY: [signature] DATE: 6-3-01
PRINT NAME: Susan FitzGerald FIRM: RF Weston TIME: 2:00
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

RELINQUISHED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: Airbill #: 8245 2414 7056
TEMP:

COC REV 3/99

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North Creek Analytical, Inc.
Environmental Laboratory Network
www.ncalabs.com

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 (425) 420-9200 FAX 420-9210 X
East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210
20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: Roy F Weston
REPORT TO: Paul Swift
ADDRESS: 190 Queen Anne Ave N., Ste 200
PHONE: (206) 521.7600 FAX:
PROJECT NAME: Columbia River / Lake Roosevelt
PROJECT NUMBER: 12644.001.002.0101.00
SAMPLED BY: Susan FitzGerald

INVOICE TO: same as client
P.O. NUMBER:

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 (STD.) 7 5 4 3 2 1 <1
Petroleum Hydrocarbon Analyses: 5 (STD.) 4 3 2 1 <1
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TOC-EPA SW-846 9060	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. 01234068	6/4/01 1030	X	S	1	—	
2. 01234054	6/4/01 1430	X	S	1	—	
3. 01234073	6/4/01 1105	X	S	1	MS/MSD	
4. 01234075	6/4/01 1830	X	S	1	—	
5. 01234077	6/4/01 1715	X	S	1	—	
6. 01234076	6/4/01 1745	X	S	1	—	
7. 01234081	6/5/01 1145	X	S	1	—	
8. 01234066	6/5/01 1345	X	S	1	—	
9. 01234091	6/5/01 1430	X	S	1	—	
10. 01234095	6/5/01 945	X	S	1	—	
11. 01234103	6/6/01 1600	X	S	1	—	
12. 01234099	6/6/01 1100	X	S	1	MS/MSD	
13. 01234106	6/6/01 1500	X	S	1	—	
14. 01234107	6/6/01 1645	X	S	1	—	
15. 01234108	6/6/01 1600	X	S	1	—	

RELINQUISHED BY: [signature] DATE: 6-6-01
PRINT NAME: Susan FitzGerald FIRM: Roy F Weston TIME: 2100
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

RELINQUISHED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: Airbill # 8245 2414 7240
TEMP:
PAGE 1 OF 1

COC REV 3/99

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10
Sampling Co.: Roy F Weston
4. Date Shipped: 6/5/01
Carrier: Fedex
Account Code: 01T10P50102D106X4400
Sampler (Name): Susan Fitzgerald
Airbill Number: 8245 2414 7090
Site Name: Columbia River/ Lake Roosevelt
Sampler Signature:
5. Ship To: Liberty Analytical, 501 Madison Ave, Cary, NC 27513, (919) 379.4100
ATTN: Alice Evans
City, State: Kettle Falls, WA
Site Spill ID: 6X
Op Unit: OC

3. Purpose**: Lead [X] SF [ ] PRP [ ] ST [ ] FED [ ] BZ; Early Action [ ] IA [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] RIFS [ ] RD [ ] RA [ ] O&M

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. PE-water 7. PE-soil 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. CH3OH 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./ Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/ PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX558	5	L	G	5			1	01234054	TR.060.SD	6/4/01 1430	MJ09E5	SMF	—
JX560	5	L	G	5			1	01234068	TR.091.SD	6/4/01 1030	MJ09G3	SMF	—
~~JX~~	~~5~~		~~G~~	~~5~~			~~1~~	~~01234065~~					
JX564	5	L	G	5			1	01234075	TR.105.SD	6/4/01 1830	MJ09H0	SMF	—
JX562	5	L	G	5			1	01234073	TR.098.SD	6/4/01 1105	MJ09G8	SMF	MS/MSD
JX566	5	L	G	5			1	01234077	TR.107.SD	6/4/01 1715	MJ0BJ2	SMF	—
JX565	5	L	G	5			1	01234076	TR.106.SD	6/4/01 1745	MJ0BJ1	SMF	—

Shipment for Case Complete? (Y/N) N
Page 1 of 1
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #: JX562
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	6-4-01 2200				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391050

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-T741A	01T10P50102D106X4400	10	Ray F Weston	6/5/01	Fedex

Regional Information: 10
Sampler (Name): Susan Fitzgerald
Airbill Number: 8245 2414 7089
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: Sentinel
116 Washington St. NE
Huntsville, AL 35801
(256) 534-9800
ATTN: Kimberly Hayes

Site Name: Columbia River/Lake Roosevelt
City, State: Kettle Falls, WA
Site Spill ID: 6X

4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MJ09E5	5	L	G	6		1						01234054	TR.060.SD	6/4/01 1430	JX558	SMF	—
MJ09G3	5	L	G	6		1						01234068	TR.091.SD	6/4/01 1030	JX560	SMF	—
MJ09H0	5	L	G	6		1						01234075	TR.105.SD	6/4/01 1830	JX564	SMF	—
MJ09G8	5	L	G	6		1						01234073	TR.098.SD	6/4/01 1105	JX562	SMF	MS/MSD
MJ0BJ2	5	L	G	6		1						01234077	TR.107.SD	6/4/01 1715	JX566	SMF	—
MJ0BJ1	5	L	G	6		1						01234076	TR.106.SD	6/4/01 1745	JX565	SMF	—
MJ09E8	5	L	G	6		1						01234055	TR.063.SD	6/4/01 1645	—	SMF	—
MJ09E9	5	L	G	6		1						01234056	TR.067.SD	6/4/01 1245	—	SMF	—
MJ09G7	5	L	G	6		1						01234072	TR.097.SD	6/4/01 1015	—	SMF	—
MJ0BJ3	5	L	G	6		1						01234078	TR.108.SD	6/4/01 1300	—	SMF	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC: MJ09G8
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s):

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6-4-01 2200				
[signature]	6-4-01 2230				
		Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392292

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10
Sampling Co.: Roy F Weston
4. Date Shipped: 6/6/01
Carrier: FedEx

Account Code: OMOP50102D106X1400
Sampler (Name): Susan FitGerald
Airbill Number:

Site Name: Columbia River/ Lake Roosevelt
Sampler Signature:

3. Purpose**
Lead: [X] SF [ ] PRP [ ] ST [ ] FED [ ] BZ
Early Action: [ ] IA [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI
Long-Term Action: [ ] RIFS [ ] RD [ ] RA [ ] O&M

5. Ship To: Liberty Analytical
501 Madison Ave
Cary N.C. 27513
919/379-4100
ATTN: Alice Evans

City, State: Little Falls, WA
Site Spill ID: 6X
Op Unit: 00

6. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. PE-water
7. PE-soil
8. Other (specify in Column A)

7. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. CH3OH
7. Other (specify in Column D)
N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./ Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/ PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX570	5	L	G	5			1	01234081	TR-059-SD	6/5/01 1145	MJOBJ6	[illegible]	—
JX568	5	L	G	5			1	01234091	TR-118-SD	6/5/01 1430	MJOBK3	[illegible]	—
JX569	5	L	G	5			1	01234095	TR-122-SD	6/5/01 945	MJOBK7	[illegible]	—
JX567	5	L	G	5			1	01234066	TR-114-SD	6/5/01 1345	MJO9G0	[illegible]	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #:
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391014

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A	2. Account Code: 01T10P5010ZD106X4A00	3. Region No.: 10	Sampling Co.: Ray F Weston	5. Date Shipped: 6/6/01	Carrier: Fedex
Regional Information: 10		Sampler (Name): Susan Fitzgerald		Airbill Number: 8245 2414 7104	
Non-Superfund Program		Sampler Signature: [signature]		6. Ship To: Sentinel	
Site Name: Columbia River/Lake Roosevelt		4. Purpose*: Lead: SF, PRP, ST, FED; Early Action: CLEM, PA, REM, RI, SI, BSI; Long-Term Action: FS, RD, RA, O&M, NPLD		116 Washington St. NE Huntsville, AL 35801 (256) 534-9800 ATTN: Kimberly Hayes	
City, State: Kettle Falls, WA	Site Spill ID: 6X				

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval — = Not a QC Sample)
MJ09G2	5	L	G	6		1						01234067	TR.090.SD	6/4/01 930	—	SMF	—
MJ09F7	5	L	G	6		1						01234064	TR.082.SD	6/4/01 1700	—	SMF	—
MJ09E7	5	L	G	6		1						01234058	TR.065.SD	6/4/01 1550	—	SMF	—
MJ09F1	5	L	G	6		1						01234057	TR.069.SD	6/4/01 1400	—	SMF	—
MJOBJ4	5	L	G	6		1						01234079	TR.056.SD	6/5/01 1000	—	SMF	—
MJOBJ5	5	L	G	6		1						01234080	TR.057.SD	6/5/01 1045	—	SMF	—
MJOBJ6	5	L	G	6		1						01234081	TR.059.SD	6/5/01 1145	JX570	SMF	—
MJOBJ7	5	L	G	6		1						01234082	TR.062.SD	6/5/01 1245	—	SMF	—
MJOBJ8	5	L	G	6		1						01234083	TR.064.SD	6/5/01 1400	—	SMF	—
MJOBJ9	5	L	G	6		1						01234084	TR.066.SD	6/5/01 1445	—	SMF	—

Shipment for Case Complete? (Y/N)	Page 1 of 1	Sample(s) to be Used for Laboratory QC	Additional Sampler Signatures	Chain of Custody Seal Number(s)
Y			[signature]	

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6-5-01 1930				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392293

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D106X400	10	Roy F. Weston	6/6/01	FedEx

Regional Information: 10
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 7126
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: Sentinel
116 Washington St. NE
Huntsville AL 35801
(256) 534-9800
ATTN: Kimberly Hayes

Site Name: Columbia River/Lake Roosevelt
City, State: Kettle Falls, WA
Site Spill ID: 6X

4. Purpose*
Lead: [X] SF [ ] PRP [ ] ST [ ] FED
Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI
Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

7. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (specify in Column A)

8. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaOH
4. H_2SO_4
5. $K_2CR_2O_7$
6. Ice only
7. Other (specify in Column D)
N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MJ0BK7	5	L	G	6		1						01234095	TR-122-SD	6/5/01 945	JX569	[signature]	—
MJ0BK2	5	L	G	6		1						01234090	TR-117-SD	6/5/01 1600	—	[signature]	—
MJ0BK3	5	L	G	6		1						01234091	TR-118-SD	6/5/01 1430	JX568	[signature]	—
MJ0BK9	5	L	G	6		1						01234097	TR-072-SD	6/5/01 1630	—	[signature]	—
*MJ09G0	5	L	G	6		1						01234066	TR-114-SD	6/5/01 1345	JX567	[signature]	—
MJ0BK8	5	L	G	6		1						01234096	TR-071-SD	6/5/01 1545	—	[signature]	—
MJ0BK1	5	L	G	6		1						01234089	TR-116-SD	6/5/01 1530	—	[signature]	—
MJ0BK6	5	L	G	6		1						01234094	TR-121-SD	6/5/01 1100	—	[signature]	—
MJ0BK5	5	L	G	6		1						01234093	TR-120-SD	6/5/01 1145	—	[signature]	—
MJ0BK4	5	L	G	6		1						01234092	TR-119-SD	6/5/01 1320	—	[signature]	—

Shipment for Case Complete? (Y/N) N
Page 1 of 1
Sample(s) to be Used for Laboratory QC
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s)

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6-5-01 2000				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392294

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A	2. Region No.: 10	Sampling Co.: Roy F Weston	4. Date Shipped: 6/7/01
Carrier: Fed Ex			
Account Code: 01T10P50102D106X LA00	Sampler (Name): Susan FitzGerald	Airbill Number: 8245 2414 7262	
Site Name: Columbia River / Lake Roosevelt	Sampler Signature: [signature]	5. Ship To: Liberty Analytical, 501 Madison Ave, Cary, N.C 27513, 919/379-4100, ATTN: Alice Evans	
City, State: Kettle Falls, WA	Site Spill ID: 6X	Op Unit:	3. Purpose** Lead: [X] SF, [ ] PRP, [ ] ST, [ ] FED, [ ] BZ; Early Action: [ ] IA, [ ] PA, [ ] REM, [ ] RI, [ ] SI, [X] ESI; Long-Term Action: [ ] RIFS, [ ] RD, [ ] RA, [ ] O&M

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. PE-water 7. PE-soil 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. CH3OH 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank, S = Field Spike, D = Field Duplicate, R = Rinsate, PE = Perform Eval.)
JX571	5	L	G	5			1	01234099	TR-077-SD	6/6/01 1100	MJOBL1	SW	MS/MSD
JX572	5	L	G	5			1	01234103	TR-086-SD	6/6/01 1600	MJOBL5	SW	—
JX791	5	L	G	5			1	01234108	TR-110-SD	6/6/01 1600	MJOBM0	KS	—
JX574	5	L	G	5			1	01234107	TR-109-SD	6/6/01 1645	MJOBL9	KS	—
JX573	5	L	G	5			1	01234106	TR-104-SD	6/6/01 1500	MJOBL8	KS	—

Shipment for Case Complete? (Y/N) Y

Page 1 of 1

VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #: JX571

Additional Sampler Signatures: [signature]

Chain of Custody Seal Number(s)

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6/6/01 1700	[signature]			
[signature]	6/6/01 1900				

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391015

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D106XLA00	10	Roy F Weston	6/6/01	Fedex

Regional Information: 10
Sampler (Name): Susan Fitzgerald
Airbill Number: 8245 2414 7284
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: Sentinel
Site Name: Columbia River / Lake Roosevelt
City, State: Kettle Falls, WA
Site Spill ID: 6X
4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD
116 Washington St. NE
Huntsville, AL 35801
(256) 534-9800
ATTN: Kimberly Hayes

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval. — = Not a QC Sample)
MJOBL4	5	L	G	6		1						01234099	✓TR.077.SD ~~01234099~~	6/6/01 1100	JX571	SW	MS/MSD
MJOBL5	5	L	G	6		1						01234103	✓TR.086.SD	6/6/01 1600	JX572	SW	—
MJ09F3	5	L	G	6		1						01234085	✓TR.074.SD	6/6/01 1030	—	SW	—
MJ09F8	5	L	G	6		1						01234086	✓TR.083.SD	6/6/01 1415	—	SW	—
*MJ09G0	5	L	G	6		1						01234087	✓TR.085.SD	6/6/01 1515	—	SW	—
MJOBL0	5	L	G	6		1						01234098	✓TR.073.SD	6/6/01 945	—	SW	—
MJOBL2	5	L	G	6		1						01234100	✓TR.078.SD	6/6/01 1215	—	SW	—
MJOBL3	5	L	G	6		1						01234101	✓TR.079.SD	6/6/01 1300	—	SW	—
MJOBL4	5	L	G	6		1						01234102	✓TR.080.SD	6/6/01 1330	—	SW	—
MJOBM2	5	L	G	6		1						01234110	TR.123.SD	6/6/01 1245	—		—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC: MJOB4
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s):

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6-6-01 1930				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392295

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P501020206XLA00	10	ROY F WESTON	6/8/01	FED EX.

Regional Information: 10
Sampler (Name): KEVIN BROOM
Airbill Number: 8245 2414 7230
Non-Superfund Program:
Sampler Signature: [signature]
6. Ship To: SENTINEL
Site Name: COLUMBIA RIVER/LAKE ROOSEVELT
City, State: KETTLEFALLS, WA
Site Spill ID: 6X
4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SL [X] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD
116 WASHINGTON ST NE
HUNTSVILLE, AL 35801
(256) 534-9800
ATTN: KIMBERLY HAYES

7. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (specify in Column A)

8. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaOH
4. H_2SO_4
5. $K_2CR_2O_7$
6. Ice only
7. Other (specify in Column D)
N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval — = Not a QC Sample)
MJOBM4	5	L	G	6		1						01234112	TR087SD	6/7/01/0915	—	KB	—
MJOBM5	5	L	G	6		1						01234113	TR089 SD	6/7/01/1000	—	KB	—
MJOBM6	5	L	G	6		1						01234114	TR093 SD	6/7/01/1030	—	KB	—
MJOBM7	5	L	G	6		1						01234115	TR095SD	6/7/01/1130	—	KB	—
MJOBM8	5	L	G	6		1						01234116	TR096SD	6/7/01/1300	—	KB	—
MJOBM9	5	L	G	6		1						01234117	TR099 SD	6/7/01/1645	—	KB	—
MJOBN0	5	L	G	6		1						01234118	TR100 SD	6/7/01/1600	—	KB	—
MJOBN1	5	L	G	6		1						01234119	TR102 SD	6/7/01/1430	—	KB	—
MJOBN2	5	L	G	6		1						01234120 KB	TR 103 SD	6/7/01/1400	—	KB	—
MJOBL6	5	L	G	6		1						01234104	TR ~~104~~ SD	6/7/01/1500	—	KB	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC:
Additional Sampler Signatures: [signature] 101
Chain of Custody Seal Number(s):

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6/7/01 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

A21-012-13 REV

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

292298

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC 774A	2. Region No.: 10	Sampling Co.: Roy F Weston	4. Date Shipped: 6/11/01
Carrier: Fedex			
Account Code: 01T10P50102D106XLA00	Sampler (Name): Susan FitzGerald	Airbill Number: 8245 2414 7137	
Site Name: Columbia River / Lake Roosevelt	Sampler Signature: [signature]	5. Ship To: Liberty Analytical, 501 Madison Ave, Cary, NC 27513, (919) 379.4100	
City, State: Kettle Falls, WA	Site Spill ID: 6X	Op Unit: 00	ATTN: Alice Evans

3. Purpose**: Lead [X] SF [ ] PRP [ ] ST [ ] FED [ ] BZ; Early Action [ ] IA [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] RIFS [ ] RD [ ] RA [ ] O&M

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. PE-water 7. PE-soil 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. CH3OH 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other: rinsate	B Conc.: Low Med	C Sample Type: Comp./Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Field Spike D = Field Duplicate R = Rinsate PE = Perform Eval.)
JX792	8	L	G	2				01234135	RS.003.SD	6/8/01 800	MJOBJ3	SMF	R
JX795	5	L	G	5				01234137	TR.040.SD	6/8/01 1645	MJOBJ5	SMF	—
JX803	5	L	G	5				01234123	TR.126SD	6/8/01 1615	MJOBK3	SMF	—
JX805	5	L	G	5				01234125	TR.038.SD	6/8/01 1130	MJOBK5	SMF	—
JX804	5	L	G	5				01234124	TR.062.SD	6/8/01 945	MJOBK4	SMF	—
JX802	5	L	G	5				01234122	TR.047.SD	6/8/01 1000	MJOBK2	SMF	—
JX798	5	L	G	5				01234140	TR.043.SD	6/8/01 1300	MJOBJ8	SMF	—
JX796	5	L	G	5				01234138	TR.041.SD	6/8/01 1500	MJOBJ6	SMF	—
JX797	5	L	G	5				01234139	TR.042.SD	6/8/01 1145	MJOBJ7	SMF	—
JX807	5	L	G	5				~~01234140~~	~~TR.043.SD~~	~~6/8/01 1300~~	MJOBK7	SMF	—
								01234127	TR.037.SD	6/8/01 1120			

Shipment for Case Complete? (Y/N) Y

Page 1 of 1

VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #:

Additional Sampler Signatures: [signature]

Chain of Custody Seal Number(s)

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6.11.01 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391019

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 29276

1. Project Code: TEC-774A
2. Region No.: 10
Sampling Co.: ROY F. WESTON
4. Date Shipped: 6/11/01
Carrier: FEDEX

Account Code: 01T10P50102D106XLA00
Sampler (Name): SUSAN FITZGERALD
Airbill Number: 8245 2414 7160

Site Name: Columbia River / LAKE ROOSEVELT
Sampler Signature:
5. Ship To: LIBERTY ANALYTICAL, 501 MADISON AVE, CARY, NC 27513, 919/379.4100, ATTN: ALICE EVANS

City, State: Kettle Falls, WA
Site Spill ID: 6Y
Op Unit: 00

3. Purpose**
Lead: [X] SF, [ ] PRP, [ ] ST, [ ] FED, [ ] BZ
Early Action: [ ] IA, [ ] PA, [ ] REM, [ ] RI, [ ] SI, [X] ESI
Long-Term Action: [ ] RIFS, [ ] RD, [ ] RA, [ ] O&M

6. Matrix (Enter in Column A): 1. Surface Water, 2. Ground Water, 3. Leachate, 4. Field QC, 5. Soil/Sediment, 6. PE-water, 7. PE-soil, 8. Other (specify in Column A)

7. Preservative (Enter in Column D): 1. HCl, 2. HNO3, 3. NaHSO4, 4. H2SO4, 5. Ice only, 6. CH3OH, 7. Other (specify in Column D), N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med	C Sample Type: Comp./Grab	D Preservative (from Box 7) Other:	E RAS Analysis TA (circle one) PR* 7 14 21 VOA	TA (circle one) PR* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/PCB	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank, S = Field Spike, D = Field Duplicate, R = Rinsate, PE = Perform Eval.)
JX793	5	L	G	5			1	01234129	TR-129-SD	6/9/01 1530	MJOBK9	SWF	—
JX800	5	L	G	5			1	01234142	TR-045-SD	6/9/01 0930	MJOBK0	SWF	MS/MSD
JX799	5	L	G	5			1	01234141	TR-044-SD	6/9/01 1030	MJOBJ9	SWF	—

Shipment for Case Complete? (Y/N): Y
Page 1 of 1
VOA MS/MSD Required? Y/N Sample #:
BNA MS/MSD Required? Y/N Sample #:
Pest/PCB MS/MSD Required? Y/N Sample #: JX800
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

*PR provides 7-day data turnaround in addition to preliminary results. Requests for preliminary results will increase analytical costs.

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	6/11/01 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Blue - Region Copy; White - Lab Copy for Return to SMO; Pink - SMO Copy; Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
**See Reverse for Purpose Code Definitions

EPA Form 9110-2 (2/99)

CLASS-99-001

391020

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A		10	Roy F Weston	6/11/01	Fedex

Regional Information: 10
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 7170
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: Sentinel
116 Washington St. NE
Huntsville, AL 35801
(256) 534.9800
ATTN: Kimberly Hayes

Site Name: Columbia River/Lake Roosevelt
City, State: Kettle Falls, WA
Site Spill ID: 6X

4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval — = Not a QC Sample)
MJOBJ9	5	L	G	6								01234 ~~119~~ 141	TR.044.SD	6/9/01 1030	JX799	SWF	—
MJOBK0	5	L	G	6								01234 ~~120~~ 142	TR.045SD ~~93~~	6/9/01 930	JX800	SWF	MS/MSD
MJOBK9	5	L	G	6								01234 129	TR.129.SD	6/9/01 1530	JX793	SWF	—
MJOBK8	5	L	G	6								01234 128	TR.128.SD	6/9/01 1500	—	SWF	—
MJOBJ7	5	L	G	6								01234 127	TR.112SD	6/9/01 1645	—	SWF	—
MJOBJ4	5	L	G	6								01234 ~~124~~ 136	TR.125.SD	6/9/01 1730	—	SWF	—

Shipment for Case Complete? (Y/N): Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC: MJOBK0
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s):

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6-11-01 ~~6:30 PM~~ 1700 ~~21:30~~				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

A21-012-13 REV

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102 D106XL400	10	Roy F Weston	6/11/01	Fedex

Regional Information: 10
Sampler (Name): Susan FitzGerald
Airbill Number: 8245 2414 7159
Non-Superfund Program
Sampler Signature: [signature]
6. Ship To: Sentinel
116 Washington St NE
Huntsville, AL 35801
(256) 534-9800
ATTN: Kimberly Hayes

Site Name: Columbia River/Lake Roosevelt
City, State: Kettle Falls, WA
Site Spill ID: 6X

4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED
Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI
Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval — = Not a QC Sample)
MJOBJ5	5	L	G	6		1						01234 ~~115~~ 137	TR.040.SD	6/8/01 1645	JX795	SMF	—
MJOBJ6	5	L	G	6		1						01234 ~~116~~ 138	TR.041.SD	6/8/01 1500	JX796	SMF	—
MJOBK4	5	L	G	6		1						01234124	CR.062.SD	6/8/01 945	JX804	SMF	—
MJOBK5	5	L	G	6		1						01234125	TR.038.SD	6/8/01 1130	JX805	SMF	—
MJOBK6	5	L	G	6		1						01234126	TR.039.SD	6/8/01 1245	—	SMF	—
MJOBK7	5	L	G	6		1						01234127	TR.037.SD	6/8/01 1120	JX807	SMF	—
MJOBJ7	5	L	G	6		1						01234 ~~117~~ 139	TR.042.SD	6/8/01 1145	JX797	LB	—
MJOBJ8	5	L	G	6		1						01234 ~~118~~ 140	TR.043.SD	6/8/01 1300	JX798	LB	—
MJOBK2	5	L	G	6		1						01234122	TR.047.SD	6/8/01 1000	JX802	LB	—
MJOBK3	5	L	G	6		1						01234123	TR.126.SD	6/8/01 1615	JX803	LB	—

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC
Additional Sampler Signatures: [signature]
Chain of Custody Seal Number(s)

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6-11-01 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392299

A21-012-13 REV

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 29276

6-11-01

1. Project Code	2. Account Code	3. Region No.	Sampling Co.	5. Date Shipped	Carrier
TEC-774A	01T10P50102D106XLA00	10	Roy F Weston	~~6/4/01~~ 6/11/01	FedEx

Regional Information	Sampler (Name)	Airbill Number
10	Kevin Broom	8245 2414 ~~7273~~ 7251

Non-Superfund Program	Sampler Signature	6. Ship To:
	[signature]	Sentinel

Site Name: Columbia River/Lake Roosevelt

City, State: Kettle Falls, WA

Site Spill ID: 6X

4. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [ ] SI [X] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

116 Washington St. NE
Huntsville, AL 35801
(256) 534-9800
ATTN: Kimberly Hayes

7. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (specify in Column A)

8. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaOH 4. H_2SO_4 5. $K_2CR_2O_7$ 6. Ice only 7. Other (specify in Column D) N. Not Preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 7) Other: Rinsate	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 8) Other:	E — RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low Only: NO_2/NO_3	Fluoride	High Only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform Eval — = Not a QC Sample)
MJ0BL8	5	L	G	6		1						01234106	TR-104-SD	6/6/01 1500	JX573	KB	—
MJ0BL9	5	L	G	6		1						01234107	TR-109-SD	6/6/01 1645	JX574	KB	—
MJ0BM0	5	L	G	6		1						01234108	TR-110-SD	6/6/01 1600	JX791	KB	—
MJ09F8	5	L	G	6		1						01234068~~5~~	TR-113-SD	6/6/01 900	—	KB	—
MJ0BM1	5	L	G	6		1						01234109	TR-111-SD	6/6/01 1400	—	KB	—
→ MJ0BK0	5	L	G	6		1						01234088 TR-115-SD	~~TR-118-SD~~	6/6/01 1030	—	KB	—
MJ0BM3	5	L	G	6		1						01234111	TR-124-SD	6/6/01 1130	—	KB	—
MJ09G6	5	L	G	6		1						01234071	TR-094-SD	6/7/01 1200	—	KB	—
MJ0BJ3	8	L	G	2		1						01234~~143~~135	RS-003-SD	6/8/01 800	JX792	SMF	R
MJ0BJ2	5	L	G	6		1						01234~~142~~143	TR-127-SD	6/8/01 1545	—	SMF	—

Shipment for Case Complete? (Y/N)	Page	Sample(s) to be Used for Laboratory QC	Additional Sampler Signatures	Chain of Custody Seal Number(s)
Y	1 of 1	~~MJ0BJ3~~ SMF	[signature]	

Chain of Custody Record

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6/11/01 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

Distribution: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1 (8/99)

See Reverse for Additional Standard Instructions
*See Reverse for Purpose Code Definitions

392296

A21-012-13 REV

nca™
North Creek Analytical, Inc.
Environmental Laboratory Network
www.ncalabs.com

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 (425) 420-9200 FAX 420-9210
East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210
20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: Roy F Weston
REPORT TO: Paul Swift
ADDRESS: 190 Queen Anne Ave N., Ste 200 Seattle, WA 98109
PHONE: (206) 521-7600 FAX: (206) 521-7601

INVOICE TO: Same as client
P.O. NUMBER:

PROJECT NAME: Columbia River/Lake Roosevelt
PROJECT NUMBER: 126414.001.002.001.00
SAMPLED BY: Susan Fitzgerald

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | <1 (STD.)
Petroleum Hydrocarbon Analyses: 5 | 4 | 3 | 2 | 1 | <1 (STD.)
OTHER — Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES: TOC-EPA 415.1 / 530.0

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TOC-EPA 415.1 / 530.0	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. 01234127	6/8/01 1120	X	S		—	
2. 01234125	6/8/01 1130	X	S		—	
3. 01234124	6/8/01 945	X	S		—	
4. 01234122	6/8/01 1000	X	S		—	
5. 01234123	6/8/01 1615	X	S		—	
6. 01234129	6/9/01 1530	X	S		—	
7. 01234137	6/8/01 1645	X	S		—	
8. 01234138	6/8/01 1500	X	S		—	
9. 01234139	6/8/01 1145	X	S		—	
10. 01234140	6/8/01 1300	X	S		—	
11. 01234141	6/9/01 1030	X	S		MS/MSD	
12. 01234142	6/9/01 ~~1530~~ 930	X	S		—	
13.		X				
14.						
15.						

RELINQUISHED BY: [signature] DATE: 6/12/01
PRINT NAME: Heather Williams FIRM: Roy F Weston TIME: 10:30
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

RELINQUISHED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: ~~Airbill #: 8245 2414 7148~~ WILL PICKUP @ WESTON 6-12-01
TEMP:

COC REV 3/99 PAGE 1 OF 1