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Completion Report for Direct Push Characterization at Four Sites in 241-C Tank Farm

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Abstract: This report documents field activities for Phase 2 characterization at 241-C Tank Farm.

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Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy
Office of River Protection under Contract DE-AC27-08RV14800

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TERMS

Energy*Solutions*	Energy*Solutions* Federal Services, Inc., Northwest Operations
RPP	River Protection Project
WAC	*Washington Administrative Code*
DOW	Description of Work
WRPS	Washington River Protection Solutions, LLC

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COMPLETION REPORT FOR 241-C TANK FARM DIRECT PUSH CHARACTERIZATION AT FOUR SITES

1.0 INTRODUCTION

The U.S. Department of Energy assigned the River Protection Project (RPP) Washington River Protection Solutions, LLC (WRPS) Richland, Washington, to collect and provide subsurface data from inside and near the 241-C Tank Farm located in the 200 East Area of the Hanford Site. WRPS contracted Energy*Solutions* Federal Services, Inc., Northwest Operations (Energy*Solutions*) to perform the field activities required to gather this data. This data was intended to provide information about the distribution and movement of contaminants in the vadose zone under and adjacent to the tank farms, and it will be used for eventual retrieval of stored tank waste and closure planning for the single-shell tanks.

FSWO-DOW-030, *Description of Work: Direct Push 241-C Farm Characterization (Eight Sites)*, Rev. 2 (see Appendix A) provides a detailed description of the scope of work performed. Energy*Solutions* was responsible for the provision of equipment and personnel to conduct the direct push activities, soil sample collection, and safety oversight. The following were included in the overall Energy*Solutions* work scope: Providing for global positioning surveys, providing subcontract geophysical logging services, providing technical support and preparing final reports. The following appendices contain copies of documentation generated during the performance of the above work scope.

Appendix A, FSWO-DOW-030, *Description of Work: Direct Push 241-C Farm Characterization (Eight Sites)*, Rev. 2
Appendix B, Global Positioning System Coordinates and Map
Appendix C, Drilling and Sampling Daily Work Records
Appendix D, Small Diameter Geophysical Logging of Four Additional Probeholes for 241-C Tank Farm Characterization, Phase 2
Appendix E, Chain of Custody Forms and Sample Documents
Appendix F, Washington State Department of Ecology Documents
Appendix G, Safety Documentation

2.0 SUMMARY OF ACTIVITIES

On June 14, 2010, drilling personnel began pushing the first 241-C Tank Farm investigative borehole per FSWO-DOW-030, Rev. 2 (Appendix A). FSWO-DOW-030, Rev. 0 was originally written to address three sites: F, L and R. The Description of Work was revised, FSWO-DOW-030, Rev 2, to include five additional boreholes that were not addressed in the original work scope. The five additional boreholes are a continuation of the work scope at 241-C Tank Farm.

FSWO-DOW-030, Rev. 2 was prepared and submitted May, 2010, and includes the scope for all eight sites, E, F, H, I, L, R, U, and V. The description of work provides detailed work instructions and information for conducting characterization efforts inside and near 241-C Tank Farm. A hydraulic hammer unit was used for placing eight exploration boreholes to refusal, or the approximate target depth of 67.67 meters (222 feet) below ground surface for geophysical logging and sample collection. Eight investigative sites were initially outlined as exploratory boreholes. Three of these were pushed earlier and are addressed in RPP-RPT-47461, *Completion Report for Direct Push Characterization at 3 Sites in 241-C Tank Farm*, Rev. 0. Of the five remaining sites, four were used. They are designated as C7671/C7672 (Site E), C7679/C7680 (Site H), C7681/C7682 (Site I) and C7675/C7676 (Site U) and were used for geophysical logging, resistivity probe placement and sampling. C7677 (Site V) was an alternate site and was not used. This completion report covers these last four sites.

The exploratory locations were selected based on ground-penetrating radar data and as-built infrastructure drawings. The initial investigation included geophysical logging from total depth to surface, using a Bismuth Germanium Oxide spectral gamma scintillation detector and a neutron-neutron moisture probe. The logging data is intended to aid in defining the extent of subsurface contamination. Obstructions from a broken drive rod in C7671 and C7679 prevented logging for the entire depth of the probehole. Cesium-137 (Cs-137) was detected near the surface in boreholes C7671 and C7675. A maximum concentration of 218 pCi/g of Cs-137 was located in borehole C7671 at a depth of 0.61 meters (2.0 feet). The four boreholes displayed no low-energy gamma activity other than that from natural activity and Cs-137. Detailed results from the geophysical logging efforts are provided in Appendix D.

At the direction of the Vadose Project Technical Point of Contact, offset boreholes adjacent to the investigative boreholes were then pushed for sampling purposes. Sample depths were chosen based on the previously obtained geophysical logging data. Sampling information is provided in Table 1 and Appendix E.

The hydraulic hammer unit and associated personnel began pushing their first borehole for this task under FSWO-DOW-030, Rev. 2, on June 14, 2010. During the week of June 21 through June 25, the field crews were able to use two hydraulic hammer units simultaneously. This task was completed September 2, 2010. There were 54 field days that the hydraulic hammer unit and crew were dedicated to the 241-C Tank Farm activities for this scope of work. There were 142.25 hours of down time associated with this task. For exact dates and explanations of down time, refer to the Drilling and Sampling (Percussion) Daily Work Records located in Appendix C.

3.0 DIRECT PUSHING, SAMPLING AND LOGGING DETAILS

3.1 DIRECT PUSHING

As directed by FSWO-DOW-030, Rev. 2, exploration hole placement and sampling was accomplished with the use of a hydraulic hammer system mounted on a tractor-type carrier. For investigative purposes, a 6.35 centimeter (2.5-inch) outside diameter x 4.45 centimeter (1.75-inch) inside diameter casing was driven at predetermined locations to specified depths, or refusal. Once a push location was geophysically logged, the data was reviewed by WRPS personnel and sample locations and depths were selected. At each borehole, a second location within approximately 0.6 meter (2 feet) of the exploratory hole was then pushed for sampling.

3.2 SOIL SAMPLING

Soil sampling with the rotary hammer unit was accomplished with the dual-wall sampling system. With the dual-wall system, once sample depth has been reached, the inner rod with the dummy drive tip is removed, and the drive tip is replaced with a sampler. The sampler consists of a 6.67 centimeter (2.625-inch) outside diameter x 4.76 centimeter (1.875-inch) inside diameter outer sample barrel, which holds a 4.13 centimeter (1.625-inch) outside diameter x 48.63 centimeter (18.75-inch) long inner sample barrel. The inner sample barrel houses three 3.18 centimeter (1.25-inch) outside diameter x 15.24 centimeter (6-inch) long stainless steel sample liners. Once the sampler and inner rod have been lowered and seated into the outer drive rod, the two are simultaneously advanced far enough to ensure that the sampler is completely filled with material. Unless refusal is met, the sampler is typically driven 0.61 meters (2 feet). Table 1 shows locations, intervals, sample numbers and percent of sample recovered.

Table 1. Sample Intervals. (4 sheets total)

Borehole Number	Depth in Feet	Sample Number	Percent Recovery
C7672	0-1	B26D01	N/A - Trip Blank
		B26D11	N/A - Field Blank
		B26CL0	N/A - Methanol Blank
		B26JL2, B26JK2	100%
		B26CL1	N/A - Methanol Blank
		B26JL3, B26JK3	100%
	5-7	B26D02	N/A - Trip Blank
		B26D12	N/A - Field Blank
		B26CJ0	N/A - Methanol Blank
		B26C69, B26C68	75%
	10-12	B26CJ1	N/A - Methanol Blank
		B26C71, B26C70	100%
	14-16	B23V95	N/A - Equipment Blank
	14-16	B26D03	N/A - Trip Blank
		B26D13	N/A - Field Blank
		B26CJ3	N/A - Methanol Blank

Table 1. Sample Intervals. (4 sheets total)

Borehole Number	Depth in Feet	Sample Number	Percent Recovery
C7672, continued		B26C75, B26C74	95%
	37-39		
		B26CJ4	N/A - Methanol Blank
		B26C77, B26C76	100%
	73-75	B26D04	N/A - Trip Blank
		B26D14	N/A - Field Blank
		B26CJ5	N/A - Methanol Blank
		B26C79, B26C78	88%
	83-85	B26D05	N/A - Trip Blank
		B26D15	N/A - Field Blank
		B26CJ6	N/A - Methanol Blank
		B26C81, B26C80	100%
	122-124	B26D06	N/A - Trip Blank
		B26D16	N/A -Field Blank
		B26CJ7	N/A - Methanol Blank
		B26C83, B26C82	80%
C7676	0-1	B26D41	N/A - Trip Blank
		B26D51	N/A - Field Blank
		B26CL4	N/A - Methanol Blank
		B26JL6, B26JK6	100%
		B26CL5	N/A - Methanol Blank
		B26JL7, B26JK7	100%
	5-7	B26D42	N/A - Trip Blank
		B26D52	N/A - Field Blank
		B26CL6	N/A - Methanol Blank
		B26CC1, B26CC0	50%
	7-9	B26CC2	45%
	10-12	B26D43	N/A - Trip Blank
		B26D53	N/A - Field Blank
		B26CL8	N/A - Methanol Blank
		B26CC5, B26CC4	100%
	14-16	B26D54	N/A - Field Blank
		B26CL9	N/A - Methanol Blank
		B26CC7, B26CC6	60%
	16-18	B26D44	N/A - Trip Blank
		B26CC8	80%
	38-40	B26D55	N/A - Water Blank
		B26CM1	N/A - Methanol Blank
		B26CD1, B26CD0	95%
	128-130	B26D45	N/A - Trip Blank
		B26D56	N/A - Field Blank
		B26CM2	N/A - Methanol Blank
		B26CD3, B26CD2	100%
	157-159	B26D46	N/A - Trip Blank
		B26D57	N/A - Field Blank
		B26CM3	N/A - Methanol Blank
		B26CD5, B26CD4	95%
C7682	0-1	B26CX1	N/A - Trip Blank
		B26CY1	N/A - Field Blank

Table 1. Sample Intervals. (4 sheets total)

Borehole Number	Depth in Feet	Sample Number	Percent Recovery
		B26CM9	N/A - Methanol Blank
		B26JM0, B26JL0,	100%
		B26CY2	N/A - Field Blank
		B26CN0	N/A - Methanol Blank
		B26JM1, B26JL1	100%
	5-7	B26CX2	N/A - Trip Blank
		B26CY3	N/A - Field Blank
		B26CF1	N/A - Methanol Blank
		B26C48, B26C47	85%
	10-12		
		B26CY4	N/A - Field Blank
		B26CF2	N/A - Methanol Blank
		B26C50	25%
	12-14	B26C51	100%
	14-16	B26CX3	N/A - Trip Blank
		B26CY5	N/A - Field Blank
		B26CF4	N/A - Methanol Blank
		B26C54, B26C53	100%
	18-20		
		B26CY6	N/A - Field Blank
		B26CF5	N/A - Methanol Blank
		B26C56, B26C55	100%
	45-47	B26PF9	N/A - Equipment Blank
		B26CX5	N/A - Trip Blank
		B26CY7	N/A - Field Blank
		B26CF6	N/A - Methanol Blank
		B26C58, B26C57	100%
	88-90	B26CX4	N/A - Trip Blank
		B26CY8	N/A - Field Blank
		B26CF7	N/A - Methanol Blank
		B26C60, B26C59	100%
	122-124	B26CX6	N/A - Trip Blank
		B26CY9	N/A Field Blank
		B26CF8	N/A - Methanol Blank
		B26C62, B26C61	95%
C7680	0-1	B26CV1	N/A - Trip Blank
		B26CW2	N/A - Field Blank
		B26CM7	N/A - Methanol Blank
		B26JL8, B26JK8	100%
		B26CM8	N/A - Methanol Blank
		B26JL9, B26JK9	100%
	5-7	B26CV2	N/A - Trip Blank
		B26CW3	N/A - Field Blank
		B26CH1	N/A - Methanol Blank
		B26C27, B26C26	85%
	10-12	B26CV3	N/A - Trip Blank
		B26CW4	N/A - Field Blank
		B26CH2	N/A - Methanol Blank
		B26C29, B26C28	70%
	14-16	B26CW5	N/A - Field Blank

Table 1. Sample Intervals. (4 sheets total)

Borehole Number	Depth in Feet	Sample Number	Percent Recovery
C-7680, continued		B26CH3	N/A - Methanol Blank
		B26C31, B26C30	100%
	17-19	B26CW6	N/A - Field Blank
		B26CH4	N/A - Methanol Blank
		B26C33, B26C32	100%
	43-45	B26CV4	N/A - Trip Blank
		B26CW7	N/A - Field Blank
		B26CH5	N/A - Methanol Blank
		B26C35, B26C34	100%
	92-94	B26CV5	N/A - Trip Blank
		B26CW8	N/A - Field Blank
		B26CH6	N/A - Methanol Blank
		B26C37, B26C36	100%
	116-118	B26CV6	N/A - Trip Blank
		B26CW9	N/A - Field Blank
		B26CH7	N/A - Methanol Blank
		B26C39, B26C38	100%
	142-144	B26CX0	N/A - Field Blank
		B26CH8	N/A - Methanol Blank
		B26C41, B26C40	90%

The sample tip, drive head, sample liners, and inner sample barrel were cleaned by 222-S lab technicians using standard *Resource Conservation and Recovery Act of 1976* protocol cleaning methods in accordance with LO-080-157, *Cleaning of Containers and Sample Collection Equipment*. This cleaning ensured that no cross contamination was introduced from previous use of the equipment or from the manufacturing process.

Samples were obtained and analyzed in accordance with WRPS Sample Authorization Form #V10-002 and #V10-003. Samples were analyzed for inductively coupled plasma metals, anions, polychlorinated biphenyls, pH, radioisotopes and several other analytes. Copies of the sample authorization forms, chain of custody forms, and associated paperwork are provided in Appendix E.

3.3 GLOBAL POSITIONING SATELLITE SURVEYING

With the use of a Trimble[1] 5800 Global Positioning Satellite Survey system and per FSWO-DOW-030, Rev. 2, the original locations of the exploratory boreholes were identified using paint and stakes. Once the task was completed and the boreholes decommissioned, each exploratory and sample borehole was recorded for accuracy. These recorded coordinates were placed on a map showing their locations in direct relation to structures and underground storage tanks in the vicinity. The coordinates, elevations and a map showing completed push locations/boreholes are provided in Appendix B.

[1]Trimble is a registered trademark of Trimble Navigation Ltd., Sunnyvale, California.

3.4 GEOPHYSICAL LOGGING

Pacific Northwest Geophysics and Three Rivers Scientific conducted the geophysical logging data collection and analysis services on the exploration 6.35 centimeter (2.5-inch) probe boreholes. For the geophysical logging, a portable small diameter logging system was used to collect spectral gamma and moisture data from the bottom of the borehole to the ground surface. Calibration and operation details, survey results and data interpretation, as well as copies of the collected and processed log data, are provided in Appendix D.

4.0 BOREHOLE DECOMMISSIONING

Decommissioning of all the boreholes was conducted in accordance with the *Washington Administrative Code* (WAC) 173-160 requirements. To decommission the sample boreholes, the tubing was back pulled while granular bentonite was simultaneously added to the tubing until it reached the surface.

Each logging borehole required decommissioning while simultaneously placing both single and multilevel resistivity probes. This was accomplished by knocking the drive tip out of the bottom of the tubing then back pulling the tubing while filling it with bentonite to near the desired probe placement depth. Approximately 0.3 meter (1 foot) of silica sand was then added to within 0.15 meter (6 inches) of the depth at which the resistivity probe was to be placed. The resistivity probe was placed, then approximately 0.91 meter (3.0 feet) of diatomaceous earth was added to the borehole, encasing the probe. Approximately 3.79 liters (1.0 gallons) of water was then added, followed with another 0.3 meters (1 foot) of silica sand. Granular bentonite was then placed from above the sand to near the next probe depth. The process was repeated for each probe location. Once all the probes were incased, granular bentonite was added to surface while back pulling the remaining tubing. A protective steel casing was cemented in place approximately 30.48 centimeters (12 inches) deep at the surface to protect the protruding probe wiring.

Per the Vadose Project Technical Point of Contact instructions, broken tubing in the bottom of boreholes C7671, C7675 and C7679 was abandoned in place. Probes were placed above the abandoned tubing. Washington State Department of Ecology documentation (Resource Protection Well Reports) is provided in Appendix F.

Table 2 shows the logged and sample boreholes, coordinates, pushed depths and resistivity probe placement depths.

Table 2. Borehole Information. (2 sheets total)

Borehole # and Type	Northing (In meters)	Easting (In meters)	Elevation (In meters)	Hole Depth (In feet)	Probe Depth (In feet)
C7671 Logging	136570.8	575168.4	197.759	221.00	40, 84 and 124
C7672 Sampling	136570.6	575167.8	197.777	124.00	NA
C7675 Logging	136568.7	575080.4	199.431	220.90	20, 38 and 78
C7676 Sampling	136568.8	575079.7	199.504	159.00	NA
C7679 Logging	136650.3	575249.3	192.529	222.30	36, 56, 76, 96,116, 136 and 156
C7680 Sampling	136650.2	575248.5	192.495	144.00	NA
C7681 Logging	136640.5	575259.4	192.716	222.00	27, 47, 67, 87, 107, 127, and 146
C7682 Sampling	136640.8	575258.7	192.717	124.00	NA

5.0 ENVIRONMENTAL, SAFETY AND HEALTH

During the 241-C Tank Farm activities, the job site was surveyed by Energy*Solutions* Operations Safety for safety and health compliance. The work scope conducted under the subject statement of work was completed with no lost time, and no reportable *Occupational Safety and Health Act of 1970* injuries. There were no incidences of equipment or personnel radiological contamination. Associated safety documentation is provided in Appendix G.

6.0 REFERENCES

FSWO-DOW-030, 2009, *Description of Work: Direct Push 241-C Farm Characterization (Three Sites)*, Rev. 0, Energy*Solutions* Federal Services, Inc., Northwest Operations, Richland, Washington.

FSWO-DOW-030, 2010, *Description of Work: Direct Push 241-C Farm Characterization (Eight Sites)*, Rev. 2, Energy*Solutions* Federal Services, Inc., Northwest Operations, Richland, Washington.

LO-080-157, *Cleaning of Containers and Sample Collection Equipment*. Richland, Washington, Advanced Technologies and Laboratories International, Inc., Richland, Washington.

WAC 173-160, "Minimum Standards for Construction and Maintenance of Wells," *Washington Administrative Code*, as amended.

Resource Conservation and Recovery Act of 1976, 42 USC 6901 et seq.

Occupational Safety and Health Act of 1970, 29 USC 651 et seq.

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APPENDIX A

FSWO-DOW-030, *DESCRIPTION OF WORK: DIRECT PUSH 241-C FARM CHARACTERIZATION (EIGHT SITES)*, REV. 2

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FSWO-DOW-030
Revision 2

DESCRIPTION OF WORK: DIRECT PUSH 241-C FARM CHARACTERIZATION (EIGHT SITES)

K. D. Reynolds

May 2010

Prepared for
Washington River Protection Solutions, LLC

by

Remediation and Well Services
Energy*Solutions* Federal Services, Inc., Northwest Operations

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TERMS

DOE	U.S. Department of Energy
DOW	description of work
Energy*Solutions*	Energy*Solutions* Federal Services, Inc., Northwest Operations
ES&H	Environmental, Safety, and Health
ID	inside diameter
OD	outside diameter
RCRA	*Resource Conservation and Recovery Act of 1976*
RPP	River Protection Project
SST	single-shell tank
WAC	*Washington Administrative Code*
Well ID	Well identification
WMA	Waste Management Area
WRPS	Washington River Protection Solutions, LLC

FSWO-DOW-030, Rev. 2

DESCRIPTION OF WORK: DIRECT PUSH 241-C FARM CHARACTERIZATION (EIGHT SITES)

1.0 INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

To meet the requirements of the *Resource Conservation and Recovery Act of 1976* (RCRA) and to provide for integration of these requirements with the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980*, an implementation plan (RPP-PLAN-37243, *Single-Shell Tank Phase 2 Resource Conservation and Recovery Act of 1976 Facility Investigation/Corrective Measures Study Master Work Plan)* was generated. RPP-RPT-38152, *Data Quality Objectives Report Phase 2 Characterization for Waste Management Area C Corrective Measures Study* outlines data that is to be collected to support the integration of these two regulatory drivers and meet the unit closure objectives. Washington River Protection Solutions (WRPS) generated a work plan (RPP-PLAN-39114, *RCRA Facility Investigation/Corrective Measures Study Work Plan for Waste Management Area C*, Rev. 0) that describes the field work necessary to collect the data identified in the data quality objective document. This description of work (DOW) provides the work instructions for conducting characterization/sampling efforts inside the 241-C Tank Farm at Sites E, F, H, I, L, R, U and V as listed in RPP-PLAN-39114, Rev 0 or latest revision. The scope of work includes: provide equipment and personnel to conduct direct push activities; support soil sample collection by WRPS-provided sampling personnel; provide safety oversight; provide geophysical logging services; attend meetings and planning sessions; and provide a written report documenting field activities and data collection at the conclusion of field work scope. This work is being conducted at the direction of the WRPS Vadose Zone Characterization Group.

1.2 BACKGROUND

The U.S. Department of Energy (DOE) assigned the River Protection Project (RPP) Single-Shell Tank Program the tasks of transferring waste from the single-shell tanks (SST) to double-shell tanks, and developing and implementing a strategy to retrieve SST waste and miscellaneous underground storage tank waste. The Single-Shell Tank Program Vadose Zone Project was given responsibility for collecting and documenting subsurface data from the SST farm facilities. This contributes to preparation for the eventual retrieval of the tank waste. The data that is being collected is intended to provide an understanding of the distribution and movement of contaminants in the vadose zone under and adjacent to the tank farms. The intent of the SST Waste Management Area's (WMA) characterization program is to collect samples that have or have not contacted tank waste. These SST farms are designated as Radiological Buffer Areas or Contamination Areas.

1.3 TANK FARM BACKGROUND

The Hanford Site has 149 underground SSTs that store hazardous radioactive waste. These tanks are grouped into 12 tank farms. The tanks sit below grade with at least 2 m (7 ft) of soil cover that shields operating personnel from radiation exposure. Tank pits are located on top of the tanks and provide access to the tanks, pumps, and monitoring equipment. Many of these tanks have leaked, and there have been leaks in the associated infrastructure (e.g., pipelines, diversion boxes). Some of the leaked waste has been shown to have impacted groundwater and exceeded compliance standards.

For regulatory purposes, the tank farms are further grouped into eight WMAs and are regulated under RCRA. WMA C encompasses the C Farm including soil and groundwater contaminated by C Farm operations. In general, the WMA C boundary is represented by the fence line surrounding the C Farm.

The C Farm was constructed in the east central portion of the 200 East Area from 1944 to 1945, and began operations in the late 1940s. Figure 1 shows a general site map of 241-C Farm. The C Farm contains twelve 100-series tanks and four 200-series tanks. The 100-series tanks are 23 m (75 ft) in diameter, have a 5 m (15-ft) operating depth, and have an operating capacity of 1,892,700 L (530,000 gal) each. The 200-series tanks are 6 m (20 ft) in diameter with a 7.32 m (24-ft) operating depth and an operating capacity of 208,000 L (55,000 gal) each.

FSWO-DOW-030, Rev. 2

Figure 1. General 241-C Farm Map.

3

The SST tank farms were constructed in excavations into the near-surface sediments that overlie the Columbia River Basalt Group. The Columbia River basalt forms the basement bedrock. There are approximately 150 m (500 ft) of continental sediments which overlie the basalt. From oldest to youngest, these deposits include the following.

- Several facies of the Miocene-to-Pliocene age, fluvial-lacustrine Ringold Formation.
- Variably cemented and pedogenically altered deposits of the Plio-Pleistocene unit, which developed on the eroded and weathered surface of the Ringold Formation.
- A relatively loose, fine-grained silty-to-sandy unit designated as the Hanford formation/Plio-Pleistocene unit interval.
- Deposits from Pleistocene age cataclysmic floods (i.e., Hanford formation) that blanket the study area with mostly sand- and silt-dominated facies, capped by a sequence of gravel-dominated facies.

2.0 METHODOLOGY

The method selected to outline the vertical and horizontal extent of contamination is a hydraulic hammer-driven probe system mounted on a tractor-type carrier. For this application, points (locations) for investigation (exploration) are selected through an iterative process as outlined in Section 3.0. Targeted sample depths are determined by review of the geophysical and moisture logs and the total depth achieved by the initial exploratory push. Eight sites (E, F, H, I, L, R, U and V) may be investigated during this phase. Currently sites F, L and R have had the exploratory probes placed, geophysical logging completed and evaluated, and have sampling depths selected. Work is currently on hold at C Farm awaiting completion of other ongoing work scope. For the remaining five possible probeholes, up to eight samples will be collected in adjacent sampling probeholes at each investigative site at the direction of the WRPS Technical Lead.

2.1 EXPLORATORY PROBEHOLES

The exploratory activities are initiated by placement of a single tubing string that is 6.4 cm (2.5-in.) outside diameter (OD) x 4.45 cm (1.75-in.) inside diameter (ID) (e.g., the exploratory push). This tubing is advanced to the target depth or refusal. Geophysical logging with bismuth germinate oxide gamma and neutron-neutron moisture instrumentation is conducted. The logging data is reviewed by the WRPS and Energy*Solutions* Federal Services, Inc., Northwest Operations (Energy*Solutions*) technical personnel to determine target sample collection points. The exploratory probehole will be decommissioned per applicable *Washington Administrative Code* (WAC) 173-160, "Minimum Standards for Construction and Maintenance of Wells," requirements (e.g., filled with bentonite or bentonite/cement grout as required) as the push tubing

is extracted. Multi-restivity electrodes may be placed in the exploration probeholes during decommissioning at the direction of the WRPS Technical Lead. When these actions are taken, sand is placed around the sending/receiving segment of the electrode assembly and bentonite is used for the remainder of the decommissioning process. Cement seals and surface protection will be placed to protect the wire leads at ground surface.

2.2 MULTIPLE SAMPLE PROBEHOLES

Sampling is conducted with outer push tubing that is 6.67 cm (2.625 in.) OD x 4.76 cm (1.875 in.) ID and inner tubing that is 3.81 cm (1.5 in.) OD x 2.54 cm (1.0 in.) ID. The dual wall system with a "dummy" tip is advanced to the pre-determined sample depth. When sampling depth is achieved and the rods back-pulled for sampling, the entire tubing string (inner and outer casing) is back-pulled 0.06 m (approximately 2 in.) to 0.12 m (approximately 5 in.) to relieve pressure from the drive shoe and tip. The removable tip is removed by extracting the inner rods. When the inner string of tubing has been removed, a sampler is attached to the inner string and returned to the bottom of the outer casing/push tubing and positioned against the inner receiver face of the drive shoe. The inner and outer tubing strings are "locked" together by use of a proprietary method, and the entire assembly is advanced through the targeted sample interval.

The sampler body holds three stainless steel liners that are 3.17 cm (1.25 in.) OD x 2.7 cm (1.08 in.) ID. After the sampler is advanced approximately 0.6 m (2 ft) the inner string is released and retrieved to surface. The liners are removed from the sampler body and surveyed. Trained sample-handling technicians document recovery, sample condition, and volume recovery percent; then the samples are packaged and transported to the selected laboratory for analysis. The dummy tip is reattached to the inner string and returned to bottom and placed in the casing shoe, and the entire assembly is then advanced to the next designated sample depth. This process is repeated until all requested samples have been collected or the tubing meets refusal.

Upon completion of the final sample extraction, or upon meeting refusal, the dummy tip or sampler is removed and the borehole is decommissioned per WAC 173-160 requirements, as described in Section 2.1.

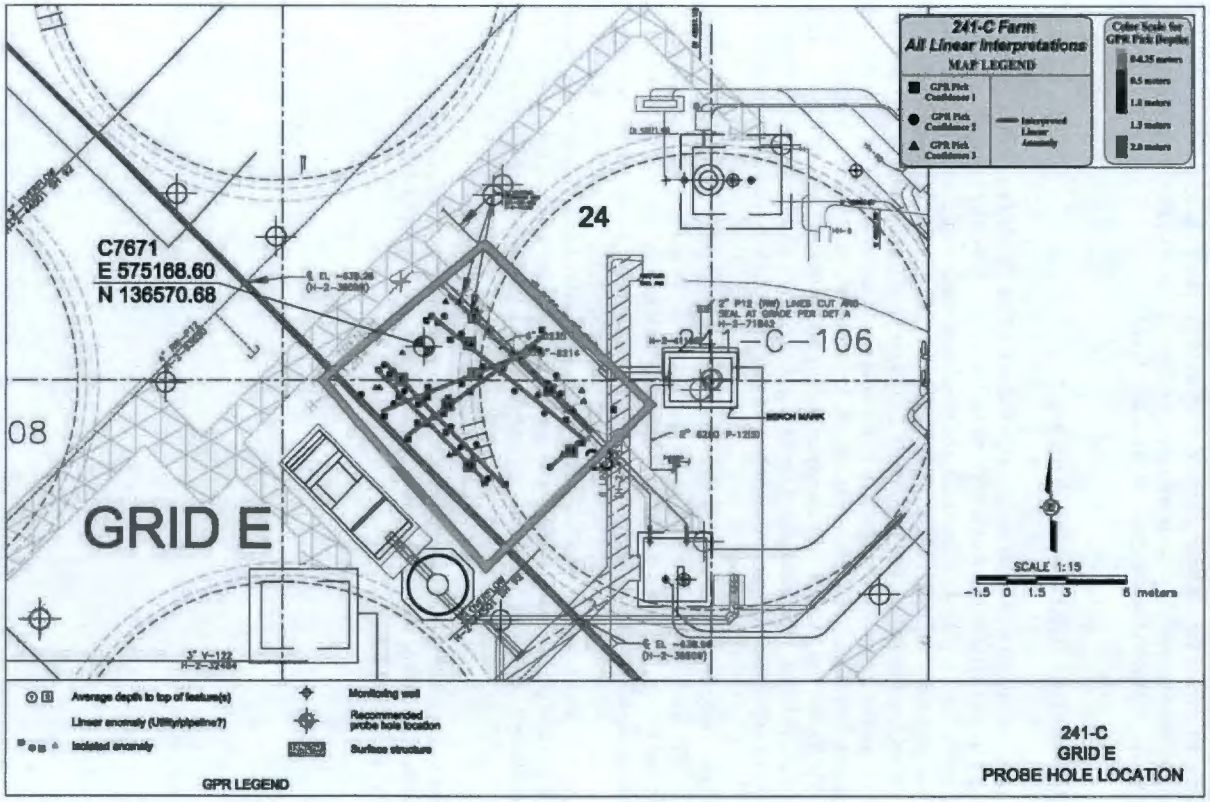
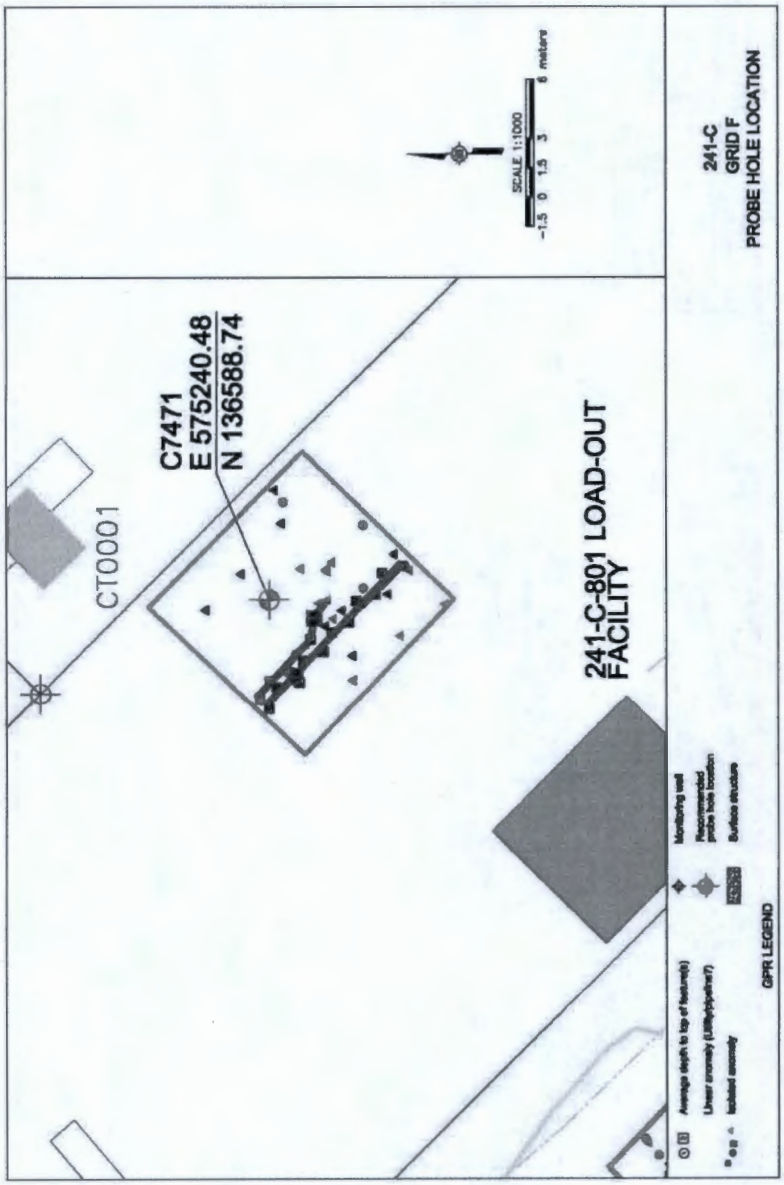


Figure 2. Site E.

FSWO-DOW-030, Rev. 2

Figure 3. Site F.



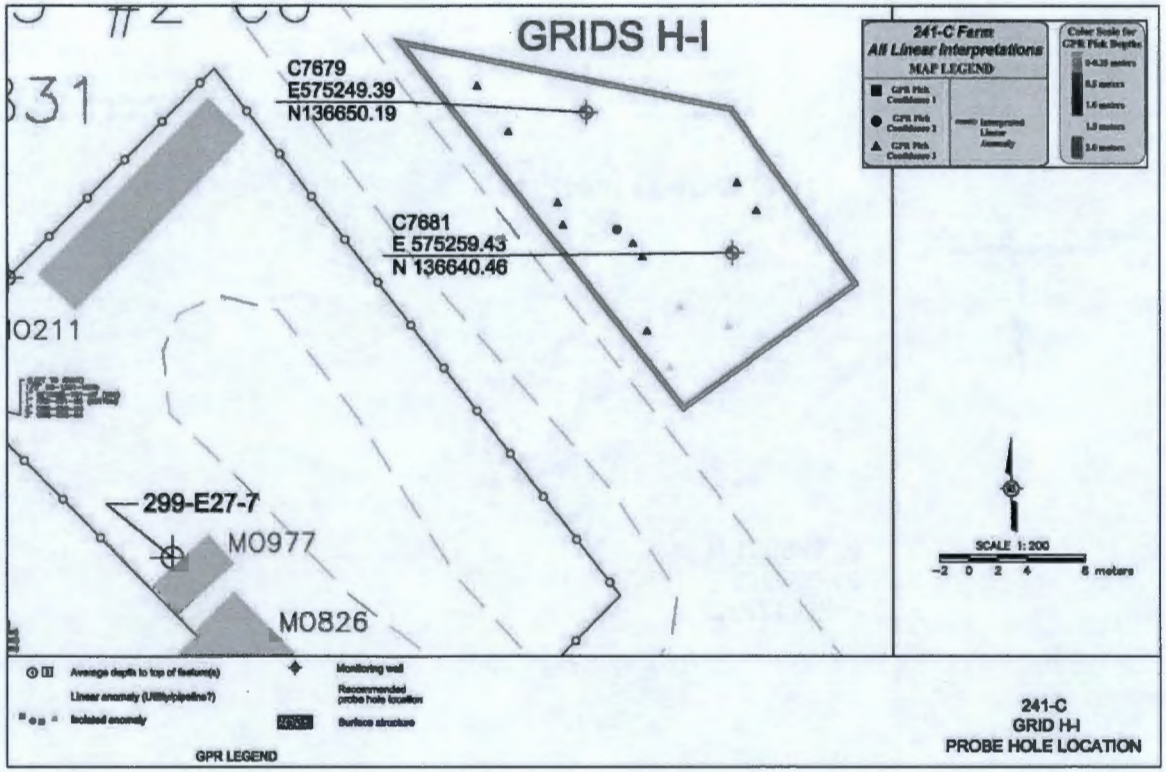
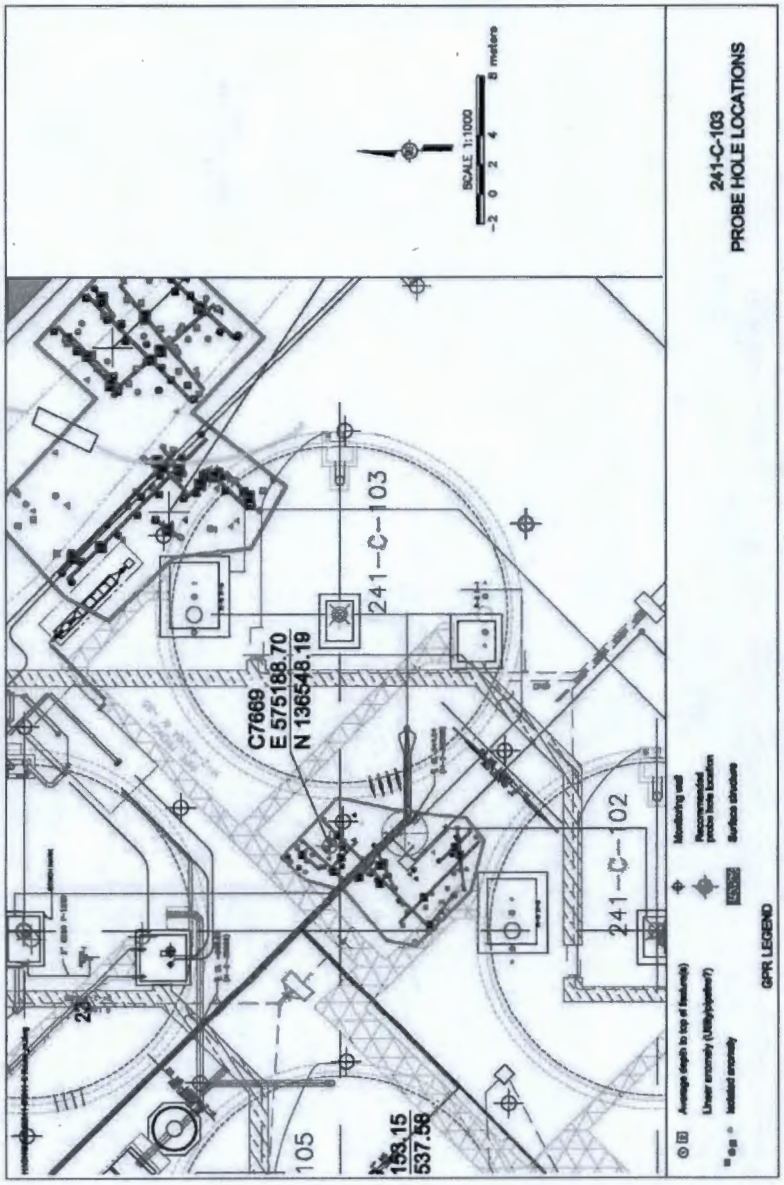


Figure 4. Sites H and I.

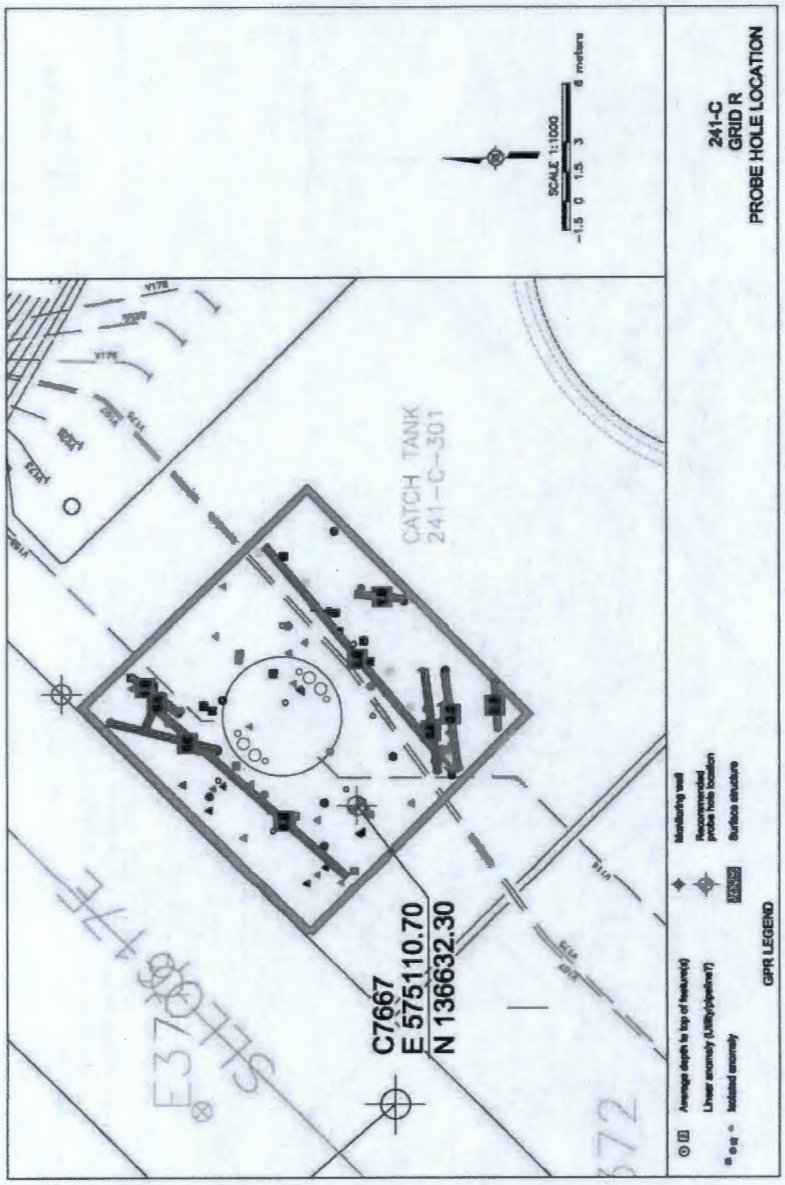
FSWO-DOW-030, Rev. 2

Figure 5. Site L.



FSWO-DOW-030, Rev. 2

Figure 6. Site R.



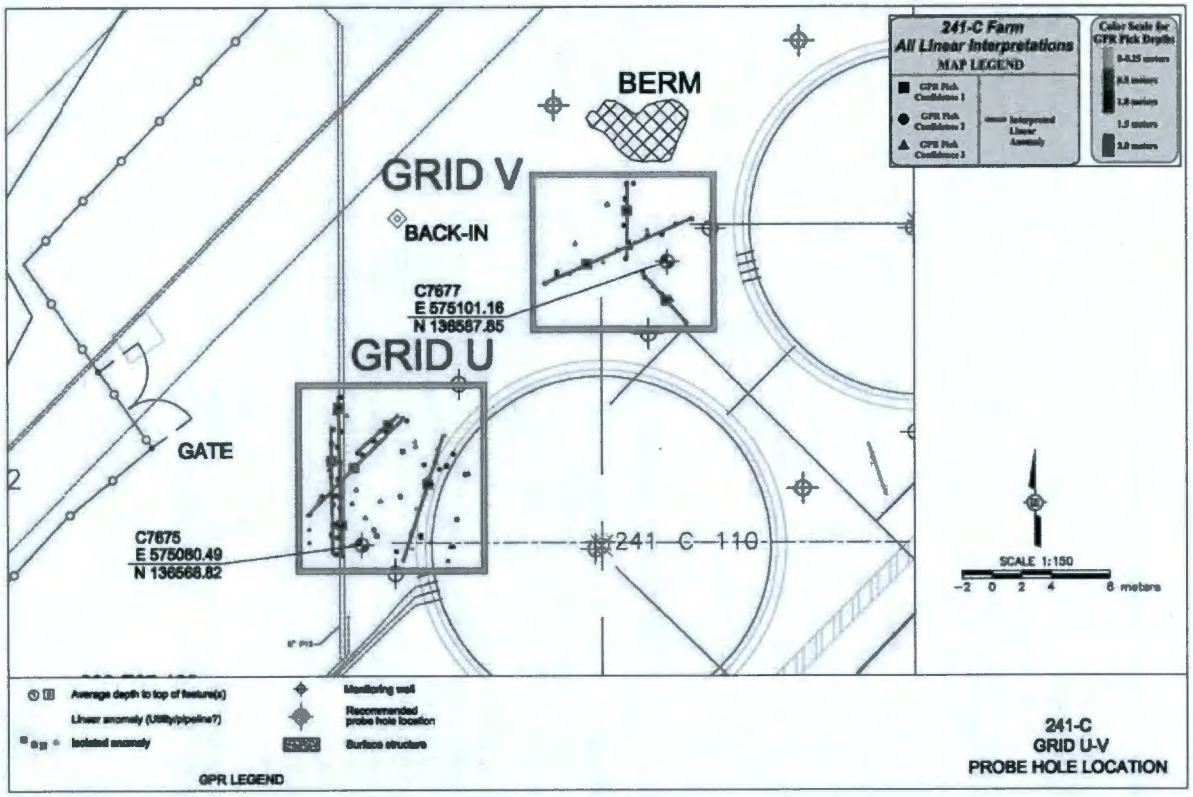


Figure 7. Sites U and V.

3.0 PROBEHOLE LOCATIONS

3.1 PROBEHOLE LOCATION DOCUMENTATION

Figures 2, 3, 4, 5, 6, and 7 are location maps of Areas E, F, H, I, L (C-103), R, U, and V that were selected for direct push activities in the 241-C Tank Farm. One location is identified at each site, and the exploratory pushes have been completed at F and L and R. All of these locations were selected through an iterative process using ground-penetrating radar scan data and as-built infrastructure drawing reviews. The two data sets were compared and sites for placement of probehole locations were selected based on the highest level of confidence achievable on review of specific locations and ground scan trace comparisons. The final location coordinates of the selected sites (determined from the ground-penetrating radar and as-built review) were plotted with computer-aided drafting. Probehole locations will be documented on Well Information Reports/Field Activity Reports. In addition to the coordinate position of the probehole location, the depth, geophysical log data and other pertinent information derived during the activity (e.g., depth of contamination as identified from geophysical log interpretation, degree of contamination observed on push rods during extraction) are included in the Field Activity Reports and Washington Department of Ecology required documentation.

3.2 PROBEHOLE LOCATION TABLES AND NUMBERING

All exploratory and sampling probehole location activities are tracked and documented on Field Activity Reports by referencing the Well identification (Well ID) number as provided in Table 1 or assigned during progress of the work. If the collection of a sample is attempted, a unique Well ID number will be used to track the probehole location on the Field Activity Report, and the sample will be identified with that Well ID number on the sample label and the shipping documentation. Each sample depth/location is identified as an offset from the exploratory push that identified the depth of interest (e.g., target sampling depth). That is, if, during the exploratory push, a zone of interest is identified at a listed coordinate position, the sampling push unique number is determined by the original identification number plus one (e.g., if a zone of interest is identified during pushing at location 1 [in Table 1, Well ID C 7471] the Well ID of the subsequent sampling probehole is C 7472). The unique Well ID numbers for all of the original probehole locations are listed, and unique sample probehole Well ID numbers have been assigned and reserved for use during the Phase 2 C Farm Characterization investigation by the Hanford Site Well Coordinator. All sampling and the single exploration push actions will be documented in the Field Activity Reports and sampling chain of custody forms and located by use of global positioning survey equipment.

Table 1. Coordinates for Eight Exploration Direct Push Locations

Probehole Number	Northing	Easting
C 7471-Site F	136588.74	575240.48
C 7669-Site L	136548.19	575188.70

C 7667-Site R	136632.30	575110.70
C 7671-Site E	136570.68	575168.60
C 7679-Site H	136650.19	575249.39
C 7681-Site I	136640.46	575259.43
C 7675-Site U	136568.82	575080.49
C 7677-SiteV	136587.85	575101.16

4.0 WORK TASKS

4.1 SITE SETUP

The push equipment will be mobilized and a controlled work area set up surrounding the pre-selected and marked locations (see Table 1 and Figures 1 through 7 above). As noted above, ground-penetrating radar scans and as-built drawing reviews and comparisons have been completed to properly select the probehole locations. A pre-survey of the tractor and equipment will be conducted (per tank farm procedure) prior to moving the equipment into the work zone. The equipment consists of a tractor-mounted mobile unit with a hydraulically powered hammer and mast system. Support equipment to be used during field activities will be mobilized into the work area as needed. A forklift will transport needed support equipment to and from the probehole locations. Tank farm personnel will provide support, as necessary, for guiding the equipment onto location and for subsequent movement of the unit to the listed probehole locations.

Tank farms radiological control technicians and nuclear chemical operators will be onsite to support work during activities that create potential personnel exposure. Contamination control measures will consist of laying spill protection material beneath the equipment (when required). Spill protection consists of placement of felt and plastic sheeting on and around the direct push unit when necessary and prudent. Control of the work area and control of potential contamination are aided by restricting site entries by unnecessary personnel. Tank farms health physics personnel will provide direction and support to ensure radiological protection is maintained for all personnel associated with the work.

4.2 PROBEHOLE LOCATION CONTROL

During advancement of the probehole, casing (push rods) will be driven into the subsurface by use of the hydraulic hammer impact system. The probehole locations have been chosen to avoid impacting known/mapped structures. The probehole will be advanced with all due caution and careful observation of the push advance rates. If rod advance indicates that obstructions are present, push advance will stop, the direct push equipment and work area will be placed in a safe condition, and the Vadose Project Technical Point of Contact (Harold Sydnor) or his designee, and the tank farm shift supervisor will be notified. If during push operations, the equipment

meets refusal as determined by trained operators of the direct push equipment (refusal is defined as a minimum of one inch of advance per minute of impact operations), the depth will be noted in the Field Activity Report and the next sequential task as defined in Section 2.0, "Methodology," will be performed.

All activities using the hammer unit will conform to the manufacturer's operating manual and applicable procedures that relate to the specific phase of work. As the push rods are extracted from the exploratory and sampling holes, the onsite health physics technician will monitor for radiological contamination. WRPS tank-farm-qualified Nuclear Chemical Operators will perform any decontamination required. The sealing requirements for decommissioning of the probeholes are defined in the appropriate sections of WAC 173-160.

4.3 GEOPHYSICAL LOGGING

At refusal or target total depth of the exploratory investigations, Pacific Northwest Geophysics will conduct logging operations to gather geophysical information. The following logging suites will be used.

1. Bismuth germanium oxide @ 100 seconds/0.5 ft.
2. Additional logging with the "Red" and/or "Green" Geiger/Muller equipment, if necessary, based on observed bismuth germanium oxide results.
3. Moisture logging @ 15 seconds/0.25 ft.

Logging data will be collected from the total depth to surface. The logging analyst, Energy*Solutions* site personnel and the WRPS Vadose Project Engineer will review the field log data. Based on the log data sets, a soil sampling interval may be selected. Logging activities will be conducted in accordance with applicable Pacific Northwest Geophysics and Energy*Solutions* procedures and the Energy*Solutions* Quality Assurance and Data Management Plans.

5.0 SAMPLING

5.1 SAMPLING PROCESS

The sampling process will entail a multiple sampling methodology as described in Section 2.0.

After retrieving the sampler to surface, the sampling system will be disassembled and the stainless steel liners will be removed for packaging and shipment to the designated laboratory. If opening of the retrieved sampler would result in more than the allowable dose rates per the Radiation Work Permit, the sampler will be placed in a transportation drum and opened under controlled conditions at the designated laboratory, or as directed by the Radiological Control organization. Collection, handling, packaging, labeling and transportation of the soil samples

and control of cleaned sampling equipment are the responsibility of the WRPS Site Services and Tank Sampling Group Nuclear Chemical Operator personnel.

5.2 CLEANING

Quality control requires that all equipment (e.g., sample liners, material retaining baskets [finger baskets], sample caps) used for the performance of sampling activities will be cleaned using U.S. Environmental Protection Agency guidelines/specifications as referenced in the RCRA. Cleaning of samplers, liners, etc. is the responsibility of the 222S Laboratory. Control and transportation of the cleaned sampling equipment is the responsibility of the WRPS Site Services and Tank Sampling Group nuclear chemical operator personnel.

Equipment used for push advance purposes (e.g., push rods, tips) will be high-pressure washed using an approved nonphosphate cleaner or hand cleaned with Simple Green[1] and potable water when equipment is unable to be released from the tank farm. The push equipment will be visibly free of dirt, grease and other possible contamination, which would potentially provide for cross-contamination of retrieved samples. After being cleaned, the equipment will be protected from unwanted contamination from surface chemicals and push operation-related chemicals. This protection will be accomplished by covering the cleaned equipment with plastic or other acceptable materials, as necessary. The cleaned and protected equipment will be tracked by use of cleaning certification documentation.

5.3 RINSATE SAMPLES

Field equipment rinsate blanks may be required for analysis purposes. This determination and the collection of these rinsate samples is the responsibility of WRPS and their designated sampling personnel.

5.4 EXPLORATION AND SAMPLING PROBEHOLE DECOMMISSIONING

Applicable WAC requirements contained in WAC 173-160 will be used to control and guide actions for decommissioning the sampling and exploratory probeholes. Each probe and sampling hole will be filled with bentonite, a bentonite slurry and/or grout (neat cement or cement-bentonite mixture) during the push rod extraction process.

6.0 ENVIRONMENTAL, SAFETY, AND HEALTH PROGRAM

The primary concern for Energy*Solutions* and the client (WRPS) is the safety of personnel assigned to perform activities related to the 241-C Tank Farm Phase 2 investigation and

[1] Simple Green is a registered trademark of Sunshine Makers, Inc., Huntington Harbor, California.

characterization. All Energy*Solutions*, WRPS, and applicable *Occupational Safety and Health Act of 1970* safety and health requirements are applied and adhered to during the field operations. An activity-specific Job Hazard Analysis outlines the specific activity hazards and the mitigation methodologies. The documentation governing the operation of the direct push rig, sampling, and decommissioning activities (AHA-09-007, *C Farm Direct Push Hydraulic Hammer Unit Operations*, Rev. 1, or most current revision) is included as a portion of the WRPS Tank Farm Work Package.

Both Energy*Solutions* Safety personnel and WRPS Tank Farm Industrial Hygiene and Safety personnel will survey the job site for safety and health compliance. Energy*Solutions* personnel and safety representatives will provide onsite inspections and visits during drilling, sampling and decommissioning/construction activities to ensure compliance with the guidance outlined in the Activity Hazard Analysis. Written reports documenting these routine inspections will be provided to the WRPS Technical Point of Contact (Harold Sydnor).

Energy*Solutions* subscribes to the Integrated Safety Management System and has implemented an Integrated Safety Management System approach into all of its work tasks. These requirements flow down, not only internally to Energy*Solutions* employees but also to Energy*Solutions* subcontractors. All of the following are in effect and will be observed, enforced and followed.

- Safety rules and procedures for safe job performance.
- Radiological Work Permit.
- WAC 173-160, as amended.
- *Occupational Safety and Health Act of 1970.*
- Client-identified standards.

These requirements are communicated to everyone associated with the project (visitors included) using the Energy*Solutions* Activity Hazard Analysis. The Activity Hazard Analysis is part of the Energy*Solutions* Environmental, Safety, and Health (ES&H) Program.

This program encompasses environment, safety and health, including pollution prevention and waste minimization. All work for this project will be analyzed in accordance with the five core functions of the Energy*Solutions* Integrated Safety Management System.

- Define the scope of work.
- Identify the work hazards and ES&H requirements.
- Analyze the work hazards and implement controls.
- Perform the work activity within the developed controls.
- Provide feedback on the adequacy of controls and safety management improvement.

The specific procedures used to accomplish these core functions are found in the Energy*Solutions* ES&H Program.

6.1 ENVIRONMENTAL, SAFETY, AND HEALTH PROGRAM KEY ELEMENTS

- Line management is responsible for the protection of employees, the public, and the environment.
- Clear and unambiguous lines of authority and responsibility for ensuring ES&H are established and maintained at all organizational levels.
- Personnel have "stop work" authority.
- Personnel possess the experience, knowledge, skills and abilities that are necessary to discharge their responsibilities.
- Resources are effectively allocated to address ES&H, programmatic, and operational considerations. Protecting employees, the public, and the environment is a priority whenever activities are planned and performed.
- Before work is performed, the associated hazards are evaluated and an agreed-upon set of ES&H standards and requirements is established which, if properly implemented, provides adequate assurance that employees, the public and the environment are protected from adverse consequences.
- Administrative and engineering controls to prevent and mitigate hazards are tailored to the work being performed and associated hazards. Emphasis should be on designing the work and/or controls to reduce or eliminate the hazards and to prevent accidents, unplanned releases, and exposures.

6.2 WRPS-REQUIRED ENVIRONMENTAL, SAFETY, AND HEALTH ELEMENTS

WRPS has provided a comprehensive list of WRPS, DOE and Hanford Site-specific procedures and requirements for conducting work within the confines of the C Tank Farm. While executing the work scope detailed in this DOW, Energy*Solutions* will comply with all applicable directives and orders resulting from WRPS requirements.

7.0 QUALITY ASSURANCE

All work on the Hanford Site is subject to the requirements of DOE Order 5700.6C, *Quality Assurance*. A Quality Assurance program has been described in applicable sections of FS-WO-QAPP-001, *Federal Services Hanford Quality Assurance Program Plan*, and FSWO-QAP-001, *Quality Assurance Procedures*.

All work will be performed in accordance with approved procedures and this work plan.

8.0 REFERENCES

AHA-09-007, *C-Farm Direct Push Hydraulic Hammer Unit Operations*, Rev 1, Energy*Solutions* Technical Services, Richland, Washington.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC 9601 et seq.

DOE Order 5700.6C, 1991, *Quality Assurance*, U.S. Department of Energy, Washington, D.C.

FS-WO-QAPP-001, *Federal Services Hanford Quality Assurance Program Plan*, Energy*Solutions* Federal Services, Western Operations, Richland, Washington.

FSWO-QAP-001, *Quality Assurance Procedures*, Energy*Solutions* Federal Services, Western Operations, Richland, Washington.

Occupational Safety and Health Act of 1970, 29 USC 651 et seq.

Resource Conservation and Recovery Act of 1976, 42 USC 6901 et seq.

RPP-PLAN-37243, 2008, *Phase 2 RCRA Facility Investigation/Corrective Measures Study Master Work Plan for Single-Shell Tank Waste Management Areas*, Washington River Protection Solutions, LLC, Richland, Washington.

RPP-PLAN-39114, *RCRA Facility Investigation/Corrective Measures Study Work Plan for Waste Management Area C*, CH2M Hill Hanford Group, Inc., Richland, Washington.

RPP-RPT-38152, *Data Quality Objectives Report Phase 2 Characterization for Waste Management Area C Corrective Measures Study*, CH2M Hill Hanford Group, Inc., Richland, Washington.

WAC 173-160, "Minimum Standards for Construction and Maintenance of Wells," *Washington Administrative Code*, as amended.

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APPENDIX B

GLOBAL POSITIONING SYSTEM COORDINATES AND MAP

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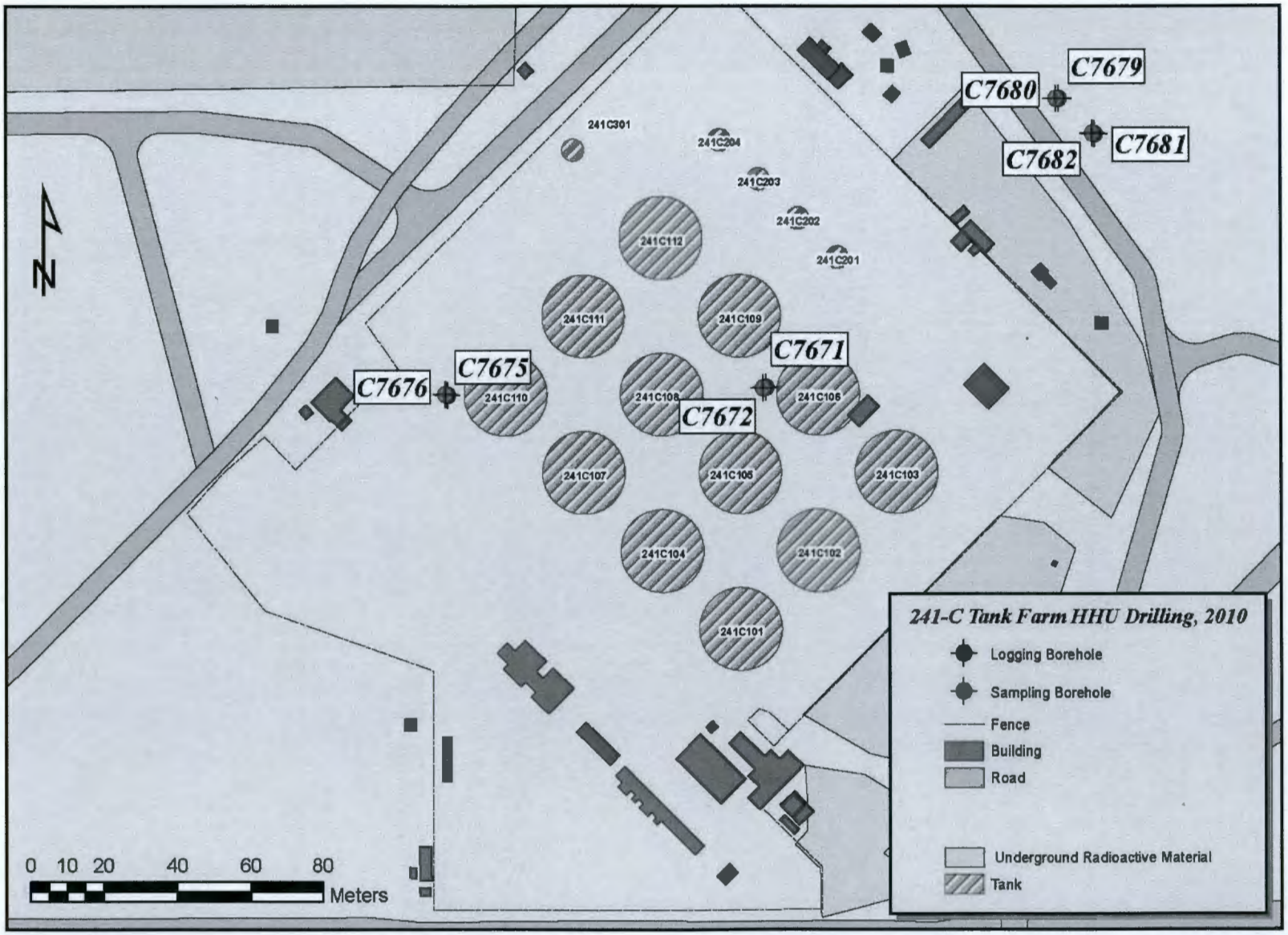
241-C Tank Farm HHU Drilling, 2010
Logging Borehole
Sampling Borehole
Fence
Building
Road
Underground Radioactive Material
Tank
C7679
C7680
C7681
C7682
C7671
C7672
C7675
C7676
241C301
241C204
241C203
241C202
241C201
241C112
241C111
241C109
241C110
241C108
241C106
241C107
241C105
241C103
241C104
241C102
241C101
N
0 10 20 40 60 80
Meters

Name	Northing	Easting	Elevation
GABLEMT	141087.6	579577.8	328.796
C7675	136568.7	575080.4	199.431
C7676	136568.8	575079.7	199.504
C7671	136570.8	575168.4	197.759
C7672	136570.6	575167.8	197.777
C7681	136640.5	575259.4	192.716
C7682	136640.8	575258.7	192.717
C7679	136650.3	575249.3	192.529
C7680	136650.2	575248.5	192.495

APPENDIX C

DRILLING AND SAMPLING DAILY WORK RECORDS

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ENERGYSOLUTIONS

ENERGY SOLUTIONS, WESTERN OPERATIONS Page 1 of 1

DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Probe Hole #C7671		DATE: 06-14-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #:9256038	REPORT #: 99
START CARD NO.SE05741	DECOMMISSION NO. AE07483	RWP: CO-541.Rev. 10 AHA-09-008.Rev.0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.		
2. N/A		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7671 Tubing (2½") @ G.S. to 140' ft bgs; S.U. 2.3

Borehole # N/A Tubing ( ) @ to ft bgs; S.U. ____

Borehole # N/A Tubing ( ) @ to ft bgs; S.U. ____

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.		
2. N/A		
3.		

TIME	WORK SUMMARY
0600	MEETING AT OFFICE, SAFETY TOPIC: WORKING TOGETHER,
—	COMMUNICATION
0620	TRAVEL TO C-FARM MO 524
0655	ARRIVE ON SITE, STANDBY FOR PRE-JOB.
—	ACE-IN AT C-FARM
0750	B. CLARK ON SITE.
0810	RCT'S ON SITE, PRE-JOB BY B. CLARK, NEW RWP
—	REV. 11
0845	DRESS & ENTER FARM
0905	INSPECT AND FUEL, WARM UP EQUIPMENT.
0910	START DRIVING 2½" FROM G.S. ON C7671.
1035	STOP LET HEAD COOL 2½" @ 64' bgs
1038	EXIT TO CHANGE TRAILER DRINK WATER, BREAK
1055	DRESS AND ENTER FARM
1100	RESUME DRIVING 2½" FROM 64' bgs
1119	STOP TO LET HEAD COOL
1125	EXIT FARM FOR LUNCH. 2½" @ 84' bgs.
1225	DRESS & ENTER FARM.
1242	RESUME DRIVING FROM 84' bgs
1320	STOP TO LET HEAD COOL 120' bgs
1334	RESUME DRIVING.
1355	STOP TO TIGHTEN UP ALLEN SCREW ON CROSS OVER SUB.
1410	RESUME DRIVING TO 140' bgs, HEAD HOT, SECURE WORK AREA & EXIT.
1530	END OF SHIFT.

OPERATOR/LICENSE: WAIKUA/3005 ES SUPPORT: EHRBOTT, WEAKLEY NCO: SWOOK, VILLEREAL HPT: BARNES, TEMPLETON. FWS: B. CLARK	WEATHER: 80°F WINDY IN THE AFTERNOON PARTLY CLOUDY DOWNTIME: 1 HR 15 MIN. WAITING FOR POD	DISCARDED ITEMS: 6 LYNCH PINS

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PAN-39114; FSWO-[illegible]

REPORT BY: MIKE EHRBOTT	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Mike Ehrbott	SIGNATURE: David E. Skoglie DATE: 6/15/10

10/06/09 Rev 1

ENERGYSOLUTIONS

ENERGY SOLUTIONS, WESTERN OPERATIONS Page 1 of 1

DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue pushing #C7671 to T.D.		**DATE:** 06-15-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 100
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** Yes No	HHU CASE#1 HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7671 Tubing (2½") @ 140' to 221' ft bgs; S.U. 1.3'
Borehole # \ Tubing ( ) @ \ to \ ft bgs; S.U. \
Borehole # \ Tubing ( ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1. N/a	NA	
2. N/A		
3. N/A		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: General Safety—Safe Attitudes.
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm, MO 524., Ace in, stand by for pre-job, RCTS
0745	Pre-job
0800	Dress into whites, inspect rig, fuel generators, tag hole,
\	(no fill detected.)
0830	Drive Probe hole C7671 from 140' to 192', letting
\	head cool .5 hr, survey out.
1130	Lunch
1200	Dress into whites, drive C7671 from 192' to 221' bgs.
\	clean-up and survey out
1430	Travel to office paperwork, time-cards
1500	End of shift
	NA

OPERATOR/LICENSE: Repko/3012 *ES SUPPORT:* Olson *NCO:* Snook, Villareal *HPT:* Templeton, Bernard *FWS:* clerk	**WEATHER:** 75 F, partly cloudy, with winds from the southwest at 5-15 mph **DOWNTIME:** .75 hr for Pre-job	**DISCARDED ITEMS:** 10 Lynch pins 1 Nylatrol washer

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson **TITLE:** *ES TECHNICAL PREPARER* **SIGNATURE:** Kelly Olson	**REVIEWED BY:** D.E. Skoglie **TITLE:** *ES TECHNICAL REVIEWER* **SIGNATURE:** David E. Skoglie **DATE:** 6/16/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Mobilize Case HHU to #C7675 and begin pushing probe hole. Begin gamma logging #C7671.		DATE: 06-16-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 101

START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: Yes No	HHU CASE#1 HHU CAT #2 HHUXL#3

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7675 Tubing (2.5") @ 0' to 80 ft bgs; S.U. 2.3

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1. N/A ~~C-7671~~	131'-120'	Gamma
2. N/A		
3. N/A		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Hydraulic Hoses And The Danger Of Leaks.
0630	Travel to 'C' farm, load generator for logging, pick up logging equipment, change oil on generator, transport equipment to 'C' farm, Ace in
0745	Arrive at C-farm, stand-by for RCTs (vehicle at shop)
0830	Pre-job
0845	Move Logging equip., fuel, and generator into farm, Dress into whites
0900	Tag hole C-7671 at 220.5' T.O.C. (221.2' BGS) 13 stick-up, move rig, air samplers and equipment to C7675, set up rig, move forklift from RMA, Bring forklift into farm, move pipe and remaining equipment to C7675, survey forklift out of farm.
1130	Lunch
1200	Press into whites, finish zone set up, begin gamma logging, Probe refused to go past 131', gamma logged 131' to 120', Drove C7675 from 0' to 80', survey out.
1430	Travel to office, paperwork and time cards.
1530	End of shift

NA

OPERATOR/LICENSE: Olson/#1217 ES SUPPORT: Weakley, Passey NCO: Rivera, Roberts HPT: Templeton, Beerwerd FWS: Clark	WEATHER: 67 F, mostly cloudy with winds from the west at 10-20 mph DOWNTIME: .75 hr. for RCTs	DISCARDED ITEMS: 6 Lynch pins

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E. Skoglie DATE: 6/17/10

10/06/09 Rev 1

ENERGYSOLUTIONS

ENERGY SOLUTIONS, WESTERN OPERATIONS Page 1 of 1

DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue pushing probe hole #C7675. Continue gamma logging probe hole #C7671.		**DATE:** 06-17-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 102
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION** (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7675 Tubing (2½") @ 80' to 128' ft bgs; S.U. 2.7'
Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \
Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1. C7671	\	\
2. N/A	\	\
3. N/A	\	\

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Over The Counter Medications.
0615	Travel to En. N.W., work on XL #3 rig while standing by for take cover drill
1000	Travel to 'C' farm, load generator and equipment for outside holes at 'C' farm
1100	Lunch
1130	Transport equipment for outside sites, and off-load at 'C' farm
1200	Pre-job at C farm
1215	Access into whites, inspect rig, Brought camera into farm, ran camera survey on C7671, found break in pipe at 151', drove C7675 from 80' to 128', survey out. (Head became hot)
1415	Travel to office, paperwork and time cards
1530	End of shift

NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT: Weakley, Ehrgott* *NCO:* Villeal *HPT:* Templeton, Barnard *FWS:* Clark	**WEATHER:** 74 F, mostly cloudy with winds from the southwest at 10-20 mph **DOWNTIME:** 4 hrs for take cover drill	**DISCARDED ITEMS:** 3 Lynch pins

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	**REVIEWED BY:** D.E. Skoglie
TITLE: *ES TECHNICAL PREPARER*	**TITLE:** *ES TECHNICAL REVIEWER*
SIGNATURE: Kelly Olson	**SIGNATURE:** D.E. Skoglie **DATE:** 6/18/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue pushing probe hole #C7675. Continue gamma logging probe hole #C7671 and mobilize CAT HHU to farm and begin pushing probe hole outside of farm.

DATE: 06-18-10

LOCATION: "C" Tank Farm, 200 East Area, Hanford

EXCAVATION: DAN-3876 **U-DIG #:** 9256038

REPORT #: 103

START CARD NO. SE05741

DECOMMISSION NO. AE07483

RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0

SITE/EQUIPMENT INSPECTION: (Yes) No

(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7675 Tubing (2.5") @ 128' to 192' ft bgs; S.U. 2.3'

Borehole # __ Tubing ( ) @ __ to __ ft bgs; S.U. __

Borehole # __ Tubing ( ) @ __ to __ ft bgs; S.U. __

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1. C7671		
2. N/A		
3. N/A		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Portable Ladder Requirements.
0615	Travel to 'C' farm
0645	Arrive at 'C' farm, stand-by for pre-job
0745	Pre-job
0815	Dress into whites, inspect rig, fuel generator, attempted logging
	C-7671, problems with equipment operation, did not want to re-start,
	Drove C7675 from 128' to 172', letting head cool once, move 2½"
	pipe out of farm for outside holes, survey out.
1130	Lunch
1200	Dress into whites, drive C7675 from 172' to 192'
	letting head cool once, survey out.
1330	Travel to office, paperwork, time cards
1430	End of shift
	Note, Mobed and Pressure washed Rig #2 (cat)
	& set up on 7681, and set up zone, drove from
	0 to 40'.
	NA

OPERATOR/LICENSE: Olson/1217
ES SUPPORT: Wealday, Ehrgott, Walkup
NCO: Villareal
HPT: Templeton, Lorenzo
FWS: Clerk

WEATHER: 79 F, mostly sunny and mild with winds from the northeast at 5-10 mph.

DOWNTIME: 1 hr for pre-job

DISCARDED ITEMS: 18 Lynch pins

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson
TITLE: ES TECHNICAL PREPARER
SIGNATURE: Kelly Olson

REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL REVIEWER
SIGNATURE: David E. Skoglie **DATE:** 6/18/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue pushing probe hole #C7675. Continue gamma logging probe hole #C7671 and continue pushing probe hole #C7681 outside of farm. **DATE:** 06-21-10

LOCATION: "C" Tank Farm, 200 East Area, Hanford | **EXCAVATION:** DAN-3876 | **U-DIG #:** 9256038 | **REPORT #:** 104

START CARD NO. SE05741 | **DECOMMISSION NO.** AE07483 | **RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0

SAMPLING SUMMARY

Sample #'s	Interval	%
1.		
2.	NA	
3.		
4.		

SITE/EQUIPMENT INSPECTION: Yes No | HHU CASE#1 HHU CAT #2 HHUXL#3

BOREHOLE SUMMARY

Borehole # C7675 Tubing (2.5') @ 142' to ft bgs; S.U. N/A
Borehole # C7681 Tubing (2.5') @ 40' to 156' ft bgs; S.U. 2.3'
Borehole # \ Tubing ( ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1. C7671		Gamma
2. \	\	\
3. \	\	\

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Everyone Is Responsible For Safety.
0630	Travel to 'C' farm, stand-by for pre-job, Acc in (arrive at "C" farm 0700)
0800	Pre-job, No work inside 'C' Farm, due to AOP-020 (HRA in effect)
\	no logging on C-7671 or pushing activity at C7681/75
0815	Enter RBA at C7675/81, inspect rig, drive from 40' to 82'
	Let head cool.
0930	Drill from 82' to 94' head hot take break let head cool
1015	Drill from 94' to 110' head got hot, load rack with more rods, clean
—	pipe, drive to Lunch trailer.
1030	Take lunch
1100	Drill from 110' to 122', let head cool down, take break
1130	Drill from 122' to 134' head hot take break let head cool
1215	Drill from 134' to 146' head hot take break let head cool
1400	Drill from 146' to 156' head hot, end of day clean up site,
—	turn generators off, drive to lunch trailer pick up lunch box
1430	Drive to office, finish paperwork, timecard
1530	End of shift

N/A

OPERATOR/LICENSE: Olsom/1217
ES SUPPORT: Weakley, Repko, Amos
NCO: Villegas, Smith
HPT: Templeton, Bernard.
FWS: Clark

WEATHER: 75 F, mostly cloudy with a chance of showers. Winds 5-15 mph.

DOWNTIME: 1 hr for pre-job
8 hr for AOP-020 Logging + C-7675

DISCARDED ITEMS: 12 - Lynchpins

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson
TITLE: *ES TECHNICAL PREPARER*
SIGNATURE: Kelly Ol

REVIEWED BY: D.E. Skoglie
TITLE: *ES TECHNICAL REVIEWER*
SIGNATURE: Dan E Skoglie **DATE:** 6/22/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue pushing probe hole #C7675. Continue gamma logging probe hole #C7671 and continue pushing probe hole #C7681 outside of farm.

DATE: 06-22-10

LOCATION: "C" Tank Farm, 200 East Area, Hanford

EXCAVATION: DAN-3876 **U-DIG #:** 9256038

REPORT #: 105

START CARD NO. SE05741

DECOMMISSION NO. AE07483

RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	N/A	
2.		
3.		
4.		

SITE/EQUIPMENT INSPECTION: (Yes) No

(HHU CASE#1) (HHU CAT#2) HHUXL#3

BOREHOLE SUMMARY

Borehole # C7681 Tubing (2.5) @ 156 to 222 ft bgs; S.U. 2.3

Borehole # C7675 Tubing (2.5) @ 192 to ~ ft bgs; S.U. N/A

Borehole # C7679 Tubing (2.5) @ 0 to 32 ft bgs; S.U. 2.3

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	N/A	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Warning: Extreme Heat Is Coming! Stay Hydrated!
0700	POD discussed heat stress (we work inside Farm)
0715	Head to rig fuel up
0730	START Driving 2½" @ 156
0800	Break (Letting head cool down
0830	Back Driving
0900	Break (Letting head cool down at 200'
0930	Back Driving
1005	At depth at 222 Feet with 2.3 STK, Pickup Site and move to C7679
1100	Lunch
1130	waiting on 2.5" Pipe
1330	Pipe on site begin driving on C 7679
1430	Down to 32 Feet with 2.3 STK
1530	End Shift
	N/A

OPERATOR/LICENSE: Amos/
ES SUPPORT: Repko
NCO: N/A
HPT: Paul + Bernard
FWS: Bill

WEATHER: 85 F, mostly cloudy and getting hotter! Winds south, southwest at 5-10 mph

DOWNTIME: 2 hrs: waiting for Pipe

DISCARDED ITEMS: 12 Lynch Pins Knock out Tip

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Olin Amos
TITLE: *ES TECHNICAL PREPARER*
SIGNATURE: Olin Amos

REVIEWED BY: D.E. Skoglie
TITLE: *ES TECHNICAL REVIEWER*
SIGNATURE: Daniel E. Skoglie **DATE:** 6/23/10

10/06/09 Rev 1

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue pushing probe hole #C7675. Continue gamma logging probe hole #C7671 and continue pushing probe hole #C7679 outside of farm.

DATE: 06-23-10

LOCATION: "C" Tank Farm, 200 East Area, Hanford

EXCAVATION: DAN-3876 **U-DIG #:** 9256038

REPORT #: 106

START CARD NO. SE05741

DECOMMISSION NO. AE07483

RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0

SAMPLING SUMMARY

Sample #'s	Interval	%
1.		
2.	NA	
3.		
4.		

SITE/EQUIPMENT INSPECTION: (Yes) No — HHU CASE#1 HHU CAT #2 HHUXL#3

BOREHOLE SUMMARY

Borehole # C7675 Tubing (2 1/2") @ 192' to 220.9' bgs; S.U. 1.4

Borehole # C7679 Tubing (2 1/2") @ 32' to 204' bgs; S.U. 2.5

Borehole # \ Tubing (\ ) @ \ to \ bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1. C7671	N/A	Gamma
2. \	\	\
3. \	\	\

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Battery Charging—A Multitude Of Hazards!
0630	Travel to "C" farm
0700	Arrive at "C" farm, stand-by for pre-job
0745	Pre-job
0800	Dress into whites, inspect rigs, fuel generators, drive
"	C-7675 from 192' to 220.9' (EOH) (hard driving, let head cool
"	3 times), Rig #2 (cat) drove C-7679 from 32' to 144',
"	clean up and survey out
11:30	Lunch
1200	Resume driving activity at C-7679, Dress into whites,
"	move rig, air samplers and equipment near Cesium
"	pile, at 1:30 75% in 25% off heat regiment
"	in place, Tag hole (C7675) found boring clean to bottom,
"	survey out, No logging conducted as Randy Price
"	unable to Ace in, (Lapsed H-65T Training), Training
"	cleared up at 14:30 for Logging to be done on swing shift.
"	Drove C-7679 from 144' to 204', clean up.
1430	Travel to office, paperwork, and time cards
1530	End of shift
	NOTE: Gamma Logging (PM) swing shift from 130 to 50
	NA ft bgs @ C7671.

OPERATOR/LICENSE: Olson/1217
ES SUPPORT: Repko, Passey, Amos
NCO: Villareal, Snook
HPT: Templeton, Bearnard, Kai, Jake
FWS: Clark

WEATHER: 88 F, partly cloudy with winds from the north at 5-10-mph

DOWNTIME: .75 hr for pre-job

DISCARDED ITEMS: 16 Lynch pins

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson
TITLE: ES TECHNICAL PREPARER
SIGNATURE: Kelly Olson

REVIEWED BY: D. E. Sikoglie
TITLE: ES TECHNICAL REVIEWER
SIGNATURE: D. E. Sikoglie **DATE:** 6/24/10

10/06/09 Rev 1

ENERGYSOLUTIONS

ENERGY SOLUTIONS, WESTERN OPERATIONS Page 1 of 1

DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Complete pushing probe hole #C7679 and demobilize CAT HHU. Continue gamma logging at #C7671. Begin moisture logging at #C7675.

DATE: 06-24-10

LOCATION: "C" Tank Farm, 200 East Area, Hanford

EXCAVATION: DAN-3876 **U-DIG #:** 9256038

REPORT #: 107

START CARD NO. SE05741

DECOMMISSION NO. AE07483

RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0

SITE/EQUIPMENT INSPECTION: (Yes) No

HHU CASE#1 (HHU CAT #2) HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.		
2.		
3.	N/A	
4.		

BOREHOLE SUMMARY

Borehole # C7679 Tubing (2.5) @ 204 to 222.3 ft bgs; S.U. 2.3

Borehole # _____ Tubing ( ) @ to ft bgs; S.U. ___

Borehole # _____ Tubing ( ) @ to ft bgs; S.U. ___

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1. C7671	55'-0'	Gamma
2. C7675		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Afterthoughts And Regrets.
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm., waiting for POD / Randy Logged
0800	Rig inspection
0830	warm up rig and Begin driving Rod from 204 feet
0910	Let head cool down (Case was surveyed out of C Farm)
0930	Driving Pipe
1000	Drove 2.5" Pipe to 222.3 with 2 feet Stk.
	Survey rig pickup site
1030	Rig Survey was good, Paul Templeton (RCT) take cat to cleaning
	Station and clean, pump off water in retention basin
1130	lunch
1206	Check materials at site C7679 And secure site
	Gather material, waiting for Logging on Holes
	NOTE: Randy + Weakley Logging hole C7671 (done)
	moved to C7675 set up

OPERATOR/LICENSE: Repko/3012
ES SUPPORT: Passey, Amos, Ehrgott
NCO: Scott, Joey
HPT: Paul
FWS: Bill

WEATHER: 86 F, mostly sunny with winds from the southwest at 5-15 mph

DOWNTIME: 1.0 hr down RCT

DISCARDED ITEMS: 10 Lynch Pins.

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Olin Amos
TITLE: *ES TECHNICAL PREPARER*
SIGNATURE: Olin Amos

REVIEWED BY: D.E. Skoglie
TITLE: *ES TECHNICAL REVIEWER*
SIGNATURE: David E. Skoglie **DATE:** 6/24/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Begin gamma logging at #C7675. Begin moisture logging at #C7671.		**DATE:** 06-28-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 108
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.		
2.	NA	
3.		
4.		

BOREHOLE SUMMARY

Borehole # ___ Tubing ( ) @ ___ to ___ ft bgs; S.U. ___

Borehole # ___ Tubing ( ) @ ___ to ___ ft bgs; S.U. ___

Borehole # ___ Tubing ( ) @ ___ to ___ ft bgs; S.U. ___

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1. C-7675	221-30	Gamma
2. C-7671	180-1	moist.
3. C7681	220-30	Moisture

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Preventing Heat Stress.
0630	Travel to 'C' Farm
0700	Arrive at 'C' Farm, stand-by for pre-job
0830	Pre-job
0900	Acc in, P.N.G set up for gamma logging at C-7675 and moisture at
	C7671, Fuel generators, begin gamma logging C7675,
	Mob equipment from outside C-Farm and 'S' Farm
	to 'BY' Farm
1130	Lunch
1200	Continue Gamma and moisture logging at 'C' Farm,
	continue moving equipment and generator from lower 'C' Farm
	and 'S' Farm to 'BY' Farm, move Dodge utility truck
	and equipment to En. N.W.
1430	Return to office, paperwork and time cards
1530	End of shift

NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Passey, Walker, Beckley *NCO:* Shook, Villareal *HPT:* Templeton, Bernard. *FWS:* Clark P.N.G R.Price	**WEATHER:** 90 F, mostly sunny with winds from the southwest at 5-10 mph **DOWNTIME:** 1.5 for pre job	**DISCARDED ITEMS:** N/A

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	**REVIEWED BY:** D.E.Skoglie
TITLE : *ES TECHNICAL PREPARER*	**TITLE:** *ES TECHNICAL REVIEWER*
SIGNATURE: Kelly Olson	**SIGNATURE:** Dan E. Skoglie **DATE:** 6/29/10

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ENERGYSOLUTIONS

ENERGY SOLUTIONS, WESTERN OPERATIONS Page 1 of 1

DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue gamma logging at #C7675. Continue moisture logging at #C7671.		**DATE:** 06-29-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 109
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** Yes (No)	*HHU CASE#1 HHU CAT #2 HHUXL#3*

Sample #'s	*Interval*	*%*
1.		
2.	NA	
3.		
4.		

BOREHOLE SUMMARY

Borehole # ____ *Tubing* ( ) @ ____ to ____ *ft bgs; S.U.* ____

Borehole # ____ *Tubing* ( ) @ ____ to ____ *ft bgs; S.U.* ____

Borehole # ____ *Tubing* ( ) @ ____ to ____ *ft bgs; S.U.* ____

GEOPHYSICAL LOGGING

Boring #	*Interval*	*Type*
1. C7675	30-1	Gamma
2. C7681	30-1	Moisture
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Hand Tool Safety.
0630	Travel to 'C' farm, pick up materials for maintance
	on rig, P.N.G. continued logging activities at 'C' farm,
	work on clean up at De-con pad, change out
	hoses on cat rig #2, continue clean up. Oil Spill.
1130	Lunch
1200	continue clean up at De-con pad, check accumulators
	on Cat Rig #2 found 80 bar unit blown, finish
	clean-up of oil spilled during hose change, put away
	tools.
1430	travel to office, paperwork and time cards
1530	End of shift
	NOTE 1: SEE LOGGING INFORMATION ABOVE.
	NOTE 2: Oil Spill on wash pad - cleaned up. Notifications
	Made. Conduct lessons learned tomorrow.
	NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Passey, Repko *NCO:* Sweek, Villareal *HPT:* Templeton, Bearnard *FWS:* Clark	**WEATHER:** 86 F, mostly sunny with winds from the southwest at 5-15 mph **DOWNTIME:** N/A	**DISCARDED ITEMS:** NA

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	**REVIEWED BY:** D.E. Sloglie
TITLE: *ES TECHNICAL PREPARER*	**TITLE:** *ES TECHNICAL REVIEWER*
SIGNATURE: Kelly Olson	**SIGNATURE:** David E Sloglie **DATE:** 6/30/10

10/06/09 Rev 1

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue gamma and moisture logging		**DATE:** 06-30-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 110
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION** (Yes) No	(HHU CASE#1) (HHU CAT #2) HHUXL#3

Sample #'s *Interval* *%*

1. NA
2.
3.
4.

BOREHOLE SUMMARY

Borehole # __ *Tubing* (_)@ _ *to* _ *ft bgs; S.U.* _

Borehole # __ *Tubing* (_)@ _ *to* _ *ft bgs; S.U.* _

Borehole # __ *Tubing* (_)@ _ *to* _ *ft bgs; S.U.* _

GEOPHYSICAL LOGGING

Boring #	*Interval*	*Type*
1. C7681	220-30	Gamma
2. C7679	178-1	Moisture
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Conduct Of Operations.
0630	Travel to Energy N.W., clean and put away hydraulic hoses,
	pick up cart for generator, P.N.G. continues gamma
	and moisture logging at 'C' Farm, work on maintenance
	on Case Rig #1 and Cat Rig #2, clean-up at de-con
	pad, move Cat rig #2 to 'BY' Farm for maintenance,
	changed hydraulic oil and motor oil in unit.
1300	Lunch
1320	continue logging at 'C' Farm, continue maintenance
	on Rigs #1 and #2. Clean-up and put away
	tools and materials.
1500	Travel to office - paperwork and time cards
1530	End of shift
	C7681 Gamma log from 220-30 ft bgs.
	C7679 Moisture log from 178-1 ft bgs.
	NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Repko *NCO:* Snook, Villareal *HPT:* Templeton, Beerneard *FWS:* Clark	**WEATHER:** 79 F, mostly sunny with winds from the west at 5-15 mph **DOWNTIME:** NA	**DISCARDED ITEMS:** N/A

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson **TITLE:** *ES TECHNICAL PREPARER* **SIGNATURE:** Kelly Olson	**REVIEWED BY:** D.E. Skoglie **TITLE:** *ES TECHNICAL REVIEWER* **SIGNATURE:** Dan Skoglie **DATE:** 7/1/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue gamma and moisture logging. Begin decommission and probe installation at #C7671.		DATE: 07-01-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 111

START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C-7671 Tubing ($4\frac{1}{2}$") @ 221' to 118' ft bgs: S.U. 2'

Borehole # \ Tubing (\ )@ \ to \ ft bgs: S.U. \

Borehole # \ Tubing (\ )@ \ to \ ft bgs: S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1. C-7681	30'-1'	Gamma
2. C-7679	176'-135'	Gamma
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Extension Cord Safety—Take No Chances!
0630	Travel to 'C' farm
0700	Arrive at 'C' farm, stand-by for pre-job
0740	Pre-job - - ace in
0800	Finish maintenance on rig, pick up equipment at "B/" farm
"	move rig #1 into 'C' farm, move sand set up rig and
"	equipment to C7671 and set-up, Back-pull $2\frac{1}{2}$" casing from
"	131' (broken joint) to 127', installed scrapers and verified
"	break, (broken joint at 132') 23 joints, top of broken pipe left
"	in hole 131' at top, 221' at bottom, survey out.
1100	Lunch
1130	PNG continue logging, gamma logged C-7681 from 30' to 1',
"	gamma logged C7679 from 176' to 135', tape up probe, gather
"	materials for probe installation, dress into whites, back fill
"	from 221' to 125.5' with bentonite, back-pull casing to
"	118' bgs., install 20/40 sand from 125.5 to 124.5, Diatomite
"	from 124.5 to 124, set single probe from 124' to 122', installed
"	diatomite from 124' to 121.5', sand 121.5' to 120.5', clean-up
"	and survey out.
1445	Travel to office, paperwork and time cards
1530	End of shift
	—
	— NA
	—

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Repko NCO: Snook, Villareal HPT: Templeton, Bearnead FWS: Clark	WEATHER: 78 F, partly cloudy with winds from the southwest at 10-20 mph. DOWNTIME: .75 hr for pre-job	DISCARDED ITEMS: 23 Joints $2\frac{1}{2}$" casing 1 Box x Box $2\frac{1}{2}$" x 2' 1 Tip holder, 1-Tip single probe 2 sacks bentonite 1-150' 1 sack sand

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: RL Steffler
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: R.L. Steffler DATE: 7-2-10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue gamma at #C7679. Continue decommissioning and probe installation at #C7671.		**DATE:** 07-02-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 112
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** (Yes) No	*HHU (CASE#)* *HHU CAT #2* *HHUXL#3*

Sample #'s	*Interval*	*%*
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C-7671 *Tubing* (2.5") @ 118' to 41' *ft bgs; S.U.* 3'
Borehole # \ *Tubing* (\ ) @ \ to \ *ft bgs; S.U.* \
Borehole # \ *Tubing* (\ ) @ \ to \ *ft bgs; S.U.* \

GEOPHYSICAL LOGGING

Boring #	*Interval*	*Type*
1. C-7679	135'-35'	Gamma
2. \	\	\
3. \	\	\

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Watch Your Step!!! Don't Slip And Fall.
0630	Travel to 'S' farm, pick up materials and equipment at 'S' farm
\	and 'BY' farm, pick up water
0730	Arrive at 'C' farm, pre-job
0800	Tape up probes, gather materials, dress into whites,
\	fuel equipment, inspect rig, Back-pull casing from 118' to
\	79' bgs, install second moisture probe (Old style) from 82' to 84',
\	-bentonite to 85.5', sand to 84.5', Diatomite from 84.5 to
\	81.5', sand to 80.5', install 1.5 gallons water via tremie pipe,
\	clean-up and survey out
1115	Lunch.
1145	stand-by for RCTs (unable to access 'Smart bldg, due to fire alarm)
1215	Dress into whites, back pull casing from 79' to 41',
\	clean threads on pipe, install bentonite to 43' bgs;
\	Survey out
1330	Travel to office, Paperwork, time cards
1430	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Repko *NCO:* Snook, Villareal *HPT:* Templeton, Lorenzen *FWS:* Clark	**WEATHER:** 77 F, rain showers throughout the day with winds from the southwest at 10-20 mph **DOWNTIME:** .5 hr for RCTs	**DISCARDED ITEMS:** 1-150' Probe old style 4 sacks bentonite

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	**REVIEWED BY:** RZ Steffler
TITLE: *ES TECHNICAL PREPARER*	**TITLE:** *ES TECHNICAL REVIEWER*
SIGNATURE: Kelly Ol	**SIGNATURE:** R.Z. Steffler **DATE:** 7-6-10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Complete gamma at #C7679. Complete decommissioning and probe installation at #C7671.		**DATE:** 07-06-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 113
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** (Yes) No	HHU (CASE#1) HHU CAT #2 HHUXL#3

Sample #'s	Interval	%
1.		
2.	NA	
3.		
4.		

BOREHOLE SUMMARY

Borehole # C-7671 Tubing (2½") @ 41' to 0' ft bgs: S.U. 1

Borehole # \ Tubing (\ ) @ \ to \ ft bgs: S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs: S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1. C-7679	35-0'	Gamma
2. \	\	\
3. \	\	\

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: HOUSEKEEPING! Keep your site and vehicles clean. No rags or trash to be left laying around.
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm, MO524. , stand-by for pre-job, work package, Acc in
0945	Pre-job, Dress into whites, enter farm, fuel rig and
\	generators, inspect rig, pack-pull 2½" casing from 41' to 35',
\	add bentonite to 41.5' add sand to 40.5', add distomite to
\	40' install 3rd moisture probe to 40' to 38', install distomite
\	to 37.5', add sand to 36.5, install 1.5 gallons of water,
\	pull remaining 9 joints of 2.5" casing and install bentonite
\	from 36.5' to 1' bgs, clean up rods and site, survey
\	out P.N.6 gamma logged C7679 from 35' to 0'
1215	Lunch
1245	Put away generator, have tags made for 5' form probe
\	holes while standing by for surface sample to be
\	taken at C-7672
1430	Travel to office, paperwork and time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Repko *NCO:* Snook, Villareal *HPT:* Templeton, Lorenzen *FWS:* Lehmann	**WEATHER:** 86 F, sunny and warm with winds from the north at 5-15 mph. **DOWNTIME:** 2.75 hr for package 1.75 hr for surface sample.	**DISCARDED ITEMS:** 2 sacks bentonite 1 55' old style probe

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	**REVIEWED BY:** RZ Steffler
TITLE: *ES TECHNICAL PREPARER*	**TITLE:** *ES TECHNICAL REVIEWER*
SIGNATURE: Kelly Olson	**SIGNATURE:** R.Z. Steffler **DATE:** 7-7-10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Begin sampling activities at #C7672.		DATE: 07-07-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 114
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

Sample #'s	Interval	%
1. B26GL0	0-6"	100%
2. \	\	\
3. \	\	\
4. \	\	\

BOREHOLE SUMMARY

Borehole # C7672 Tubing (NA)@ \ to \ ft bgs; S.U. \
Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \
Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Accident Prevention: Why It Is Important To You.
0645	Travel to "C" Tank Farm.
0715	Onsite at "C" Tank Farm, MO524., stand-by for samplers, pre-job
0915	samplers on site, dress into whites, enter farm,
"	move rig off hole for surface sample, survey out
0945	samplers on site, (at 0915), enter farm and
"	take surface sample B26GL0, B26JK2, B26JL2
"	Duplicate #, B26JK3, B26JL3, B26GL1, and Field blank
"	B26D11 and trip blank B26D01, exit farm.
1100	Lunch
1130	stand-by for samplers
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Steffler NCO: Snook, Villareal HPT: Templeton, Clayton FWS: Lehmann	WEATHER: 95 F, sunny and warm with winds from the northeast at 5-15 mph. DOWNTIME: 6 hr stand by for samplers	DISCARDED ITEMS: NA

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson TITLE: ES TECHNICAL PREPARER SIGNATURE: Kelly Olson	REVIEWED BY: RZ Steffler TITLE: ES TECHNICAL REVIEWER SIGNATURE: R.Z. Steffler DATE: 7-8-10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7672.		**DATE:** 07-08-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 115
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** (Yes) No	HHU (CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26D12	5'-7'	Shea. - 100% A Liner - 100% B-Liner - 100% C-Liner - 0%
2.		
3. B26CJ1	10-12	- 100%
4.		

BOREHOLE SUMMARY

Borehole # C7672 Tubing (2 5/8" Tub) @ 0' to 12' ft bgs; S.U. 2.3

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Safety And Saving Time.
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm, MO524., ace in, stand-by for Pre-job (RCT)
0745	RCT's on site - pre job
0800	Dress into whites, enter farm, inspect rig, set up on hole #
\	C7672, set up shade and misters, drive 2 5/8" dual string
\	from 0' to 5', pull dummy tip, install sample # B26D12 from 5' to 7'
\	at 0820, Pulled sample, processed sample, waited until adequate volume
\	was verified by sampler, drove 2 5/8" dual wall to 10', pulled dummy tip,
\	installed sampler, drove sample # B26CJ1 from 10' to 12' bgs at 1015,
\	pulled sample, processed sample (100% recovery), survey out and clean-up.
1130	Lunch
1200	Stand-by for samplers, work at clean-up at 'J' farm
	while standing by
1530	End of shift
	Interval #1, sample #s B26CJ0, C68, C69
	Interval #2, sample #s B26CJ1, C70, C71
	Trip #2 - B26D02
	NA Field #2 - B26D12
	R25

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Passey *NCO:* Vilkreal *HPT:* Clayton, Templeton *FWS:* Lehmann	**WEATHER:** 100 F, sunny and hot! Winds will be light and variable. **DOWNTIME:** .75 hr for Rcrs 3.5 hr for samplers	**DISCARDED ITEMS:** 6 sample liners 12 sample caps

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	**REVIEWED BY:** RZ Steffler
TITLE: *ES TECHNICAL PREPARER*	**TITLE:** *ES TECHNICAL REVIEWER*
SIGNATURE: Kelly Olson	**SIGNATURE:** R.Z. Steffler **DATE:** 7-12-10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7672.		**DATE:** 07-12-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 116

START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7672 Tubing (2 5/8") @ 12' to \ ft bgs; S.U. \
Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \
Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Working Together.
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm, MO524. , stand-by for package
0830	Pre job
0845	gather equipment, start to dress in
0900	shut down for wind, installed tags on probe borings
—	at 'S' farm while standing by for wind
1130	Lunch
1300	continue stand-by for wind, move equipment to
	Energy N-W
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Repko *NCO:* Snook, Villareal *HPT:* Clayton, Bearnard, Lorenzo *FWS:* Lehmann, Clark	**WEATHER:** 85 F, sunny and warm. Winds will be from the southwest at 15-30 mph. **DOWNTIME:** 1.5 hr for package 6 hr for wind	**DISCARDED ITEMS:** NA

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson **TITLE:** *ES TECHNICAL PREPARER* **SIGNATURE:** Kelly Olson	**REVIEWED BY:** RZ Steffler **TITLE:** *ES TECHNICAL REVIEWER* **SIGNATURE:** R.Z. Steffler **DATE:** 7-13-10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7672.		DATE: 07-13-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: ~~116~~ 117
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26C33	14-16	100% sleeve
2. B26C75		100% - A liner
		100% - B liner
		90% - C liner
3. B26C34	-37-39'	100%
4. B26C76		
B26C77		

BOREHOLE SUMMARY

Borehole # C7672 Tubing (2 5/8") @ 12' to 61' ft bgs; S.U. 1.3'

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Back Safety.
0615	Travel to "C" Tank Farm.
0645	Onsite at "C" Tank Farm, MO524., stand-by for pre-job
0745	Pre-job
0800	Dress into whites, enter farm, inspect rig, drive C 7672 from
\	12' to 14', Pull dummy tip, install sampler, drove sample #
\	B26C33 from 14' to 16' at 09:00, pulled sample, checked
\	recovery, & 95% recovery, installed dummy tip, drove
\	dual wall to 37' pulled dummy tip, installed sampler
\	drove sample # B26C34 from 37' to 39' at 1110, pulled
\	and processed sample, survey out
1200	Lunch
1230	Dress into whites, install dummy tip, drive 2 5/8"
\	Dual string from 39 to 61', put away equipment.
\	survey out.
1430	Travel to office, paperwork, time cards
1530	End of shift
	Trip Blank #3 = B26D03 RZS
	NA Field Blank #3 = B26D13

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Repko, Elargott NCO: Snook, Villareal HPT: Clayton, Bernard FWS: Clark	WEATHER: 83 F, sunny and warm. Winds will be from the southwest at 5-15 mph. DOWNTIME: 1 hr for pre-job	DISCARDED ITEMS: 6 sample liners 12 sample caps 8 Lynch pins

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: RZ Steffler
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: R.Z. Steffler DATE: 7-14-10

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ENERGY SOLUTIONS, WESTERN OPERATIONS

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7672.		DATE: 07-14-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 118
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: Yes No	HHU CASE#1 HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26D14	73-75	Shee 50%
2. B26C78		A-100%
3. B26D79		B-100%
4.		C-100%

BOREHOLE SUMMARY

Borehole # C7672 Tubing (2 5/8") @ 61' to 83 ft bgs; S.U. ____

Borehole # ____ Tubing ( ) @ ____ to ____ ft bgs; S.U. ____

Borehole # ____ Tubing ( ) @ ____ to ____ ft bgs; S.U. ____

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Suspect And Counterfeit Parts.
0700	Travel to "C" Tank Farm.
0730	Onsite at "C" Tank Farm. MO524. , stand-by for pre job
0800	Pre-job
0815	Dress into whites, enter farm, fuel generators, inspect rig, drive dual strings casing from 61' to 73', pulled dummy tip, installed sampler, drove sample B26D14 from 73' to 75' at 1000, pulled and processed sample, installed dummy tip, drove C7672 from 75' to next sample interval of 83' bgs. survey out.
1145	Lunch
1215	Gather equipment, checks, for RCT
1230	Dress into whites, pull dummy tip, install sampler to depth, clean-up, survey out.
1400	Travel to office, paperwork, time cards
1530	End of shift

NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Repko NCO: Snook, Villereal HPT: Templeton, Beerend. FWS: Clark	WEATHER: 89 F, sunny and warm. Winds will be light and variable from the southwest. DOWNTIME: .5 hr for pre-job.	DISCARDED ITEMS: 3 sample liners 6 sample caps 4 Lynch pin

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: RZ Steffler
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: R.Z. Steffler DATE: 7-14-10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7672.		**DATE:** 07-15-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 U-DIG #: 9256038	**REPORT #:** 119
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** (Yes) No	HHU (CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

	Sample #'s	Interval	%
1.	B26C362, B26C805, B26C81	83-85	100%
2.	\	\	\
3.	\	\	\
4.	\	\	\

BOREHOLE SUMMARY

Borehole # C7672 Tubing (2 5/8") @ 83' to 122 ft bgs; S.U. ____

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: HHU Loadout Review.
0640	Travel to "C" Tank Farm.
0730	Onsite at "C" Tank Farm, MO524. , Pre-job
0750	Gather fuel and equipment, dress in whites, enter farm,
\	Fuel generators, inspect rig, change out jaws in 18" pipe wrenches,
\	drive sample #B26C36 at 0950 from 83' to 85', pulled and processed
\	sample, install dummy tip, drive 2 5/8" dual string from 85' to 104',
\	clean up and survey out.
1100	Lunch
1130	Dress into whites, Enter farm, replace bolt in adjustment head
\	for dual strings, drive 2 5/8" casing from 104' to 122', survey out.
1300	Stand-by for meeting on work at Cesium pit
\	pick up equipment at B4 farm and bentonite at
\	chem storage while standing by
1500	Travel to office, paperwork, time cards
1520	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Repko *NCO:* Snook, Villareal *HPT:* Templeton, Clayton *FWS:* Clark	**WEATHER:** 96 F, sunny and warm. Winds will be from the southwest at 5-15 mph. **DOWNTIME:** 2 hr for meeting on future work	**DISCARDED ITEMS:** 2-18" heel jaws 2-18" Hook jaws 1-3/4" Allen bolt (3) sample liners 1-2 1/2" Allen bolt (6) liner caps 4- Lynch pins

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson **TITLE:** *ES TECHNICAL PREPARER* **SIGNATURE:** Kelly Olson	**REVIEWED BY:** D.E. Skoglie **TITLE:** *ES TECHNICAL REVIEWER* **SIGNATURE:** David E. Skoglie **DATE:** 7/16/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Complete sampling activities at #C7672 and begin decommissioning.		DATE: 07-16-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 120
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	HHU (CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26727	122-124	Slag-34%
2. B26782		A-100%
3. B26783		B-100%
4. —		C-90%

BOREHOLE SUMMARY

Borehole # C7672 Tubing (2 5/8") @ 122' to 124 ft bgs; S.U. 2.3'

Borehole # C7672 Tubing (2 5/8") @ 124' to 80 ft bgs; S.U. 2.2'

Borehole # — Tubing ( ) @ — to — ft bgs; S.U. —

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Heat Stress.
0640	Travel to "C" Tank Farm.
0710	Onsite at "C" Tank Farm, MO524. stand by for pre-job
0740	Pre-job
0800	Move bentonite into C-farm, dress into whites, enter farm inspect rig, fuel generators, pull dummy tip, install sampler, drive sample #B26727 from 122' to 124' at 1005, pulled and processed sampler, cleaned and capped 1ft rods, survey out.
1130	Lunch
1200	stand-by for RCTs
1230	Dress into whites, enter farm, back pulled C-7672 from 124' to 80' bgs', installed bentonite from 124' to 82', clean up and survey out
1330	Travel to office paperwork, time cards
1430	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Repko NCO: Villareal, Don Hallman HPT: Templeton, Becerrard FWS: Clark	WEATHER: 95 F, sunny and warm. Winds will be from the southwest at 5-15 mph. DOWNTIME: .5 hr for pre-job .5 hr for RCTs	DISCARDED ITEMS: 3 sample liners 6 sample caps 3 sacks bentonite

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E.S Koghe
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E. Koghe DATE: 7/19/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Complete decommissioning at #C7672. Begin sampling activities at #C7676.		DATE: 07-19-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 121
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: Yes No	HHU CASE#1 HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26D41, B26D51	0-1'	100%
2. B26K6	–	–
3. B26L6	–	–
4. B26C4, B26K7, B26L7, B26L5	–	–

BOREHOLE SUMMARY

Borehole # C7672 Tubing (2 5/8") @ 80' to 0 ft bgs; S.U. 1

Borehole # C7676 Tubing (2 5/8") @ 0' to 1' ft bgs; S.U. NA

Borehole # – Tubing ( )@ – to – ft bgs; S.U. –

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

WORK SUMMARY

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Dust Devils And Pop-up Canopies.
0635	Travel to "C" Tank Farm.
0705	Onsite at "C" Tank Farm, MO524, acc in, stand-by, for pre-job
0825	RCTs on site, pre-job, samplers on site
0845	Dress into whites, enter farm, inspect rig, fuel generators,
"	mark sample spot @ C7676 2½' West of C7675, surveyed out tonic
"	pipe for BY farm, back-pulled C7672 from 80' to 0' installed
"	6 bags bentonite, moved rig to C7676 and set up, samplers
"	took surface sample at C7676, clean up and survey out
1130	Lunch
1200	Dress into whites, move pipe, generators, air samplers,
"	tooling and mice to C-7676, move 2½" pipe to
"	storage, clean pipe, survey out.
1400	Gather equipment for A.M.
1430	Travel to office, paperwork and time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Repko K.O NCO: Sauk, Villarreal, Clayton HPT: Templeton, Lorenzen, Clayton FWS: Clark, Lehman	WEATHER: 91 F, sunny and warm. Winds will be from the southwest at 5-15 mph. DOWNTIME: 1.25 hr for pre-job	DISCARDED ITEMS: 6 sacks bentonite 1 2 5/8" Tip holder

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: D.E. Skoglie DATE: 7/20/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7676.		DATE: 07-20-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 122
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

Sample #'s / Interval / %
1. B26CC6 } 5-7 Shoe 85%
2. B26CC0, B26CC1, B26D52 } 5-7 A - 40%, B - 30%, C - Empty
3. B26D92 Shoe 100%
4. B26CC2, B26CC3 } 7-9 A - 40%, B - 15%, C - Empty

BOREHOLE SUMMARY

Borehole # C7676 Tubing (2 5/8) @ 1' to 10' ft bgs; S.U. 3'
Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \
Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Housekeeping! Remove discarded items from work area.
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm, MO524. , stand-by for pre-job
0745	Pre-job
0815	Press into whites, Enter farm, inspect rig, fuel equipment, Finish
\	set up of zone and equipment, drive 2 5/8 dual string from 0'
\	to 5', pull dummy tip, install sampler, drive sample # B26CC0
\	at 0930 from 5' to 7', back-pulled and processed sample,
\	inadequate volume (approximately 50% recovery) installed second sampler
\	for 'back to back' drive, drove and sample # B26CC2 at
\	1015, pulled and processed sample # B26CC2 (approximate 45% recovery,
\	drive interval = 7' to 9' bgs.) install dummy tip drive to
\	10' bgs, next sample interval. clean-up and survey out.
1130	Lunch
1200	Stand-by for samplers
1230	Pick up equipment at 'B' trailer while standing by for
\	samplers, fuel pick-up, Travel to office, paperwork, time cards.
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Repko NCO: Vilkreal, Snook HPT: Templeton, Bearnard FWS: Clark, Lehmann	WEATHER: 94 F, sunny and warm. Winds will be light and variable from the southwest. DOWNTIME: .75 hr for pre-job 2.5 hr for samplers	DISCARDED ITEMS: 6 sample liners 12 sample caps

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.F. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David F. Skoglie DATE: 7/21/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7676.		DATE: 07-21-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 123
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: Yes No	HHU CASE#1 HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26CL8, B26CC6	10-12	100%
2. B26CC7, B26DS3	14-16	Slug-100%, A-100%, B-90%, C-0%
3. B26CL9, B26DS4		
4. B26DS3, B26CC4, B26CC5		

BOREHOLE SUMMARY

Borehole # C7676 Tubing (2 5/8") @ 10' to 16 ft bgs; S.U. 2.3'

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Good Hygiene On The Job.
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm, MO524. , stand-by for pre-job
0800	Pre-job
0815	Dress into whites, inspect rig, fuel generators, pull dummy tip,
\	install sampler, drive sample #B26CL8 at 0900 from 10' to 12', pulled
\	sampler, processed sampler stand-by for recovery information, install dummy
\	tip, drive to next sample interval of 14', Pull dummy tip
\	install sampler, drive sample #B26CL9 at 1005 from 14' to 16', pulled
\	sample, processed sample, stand-by for recovery, (inadequate recovery
\	approximately 60%) clean-up and survey out.
1130	Lunch
1200	Stand-by for WRPS all hands meeting, pick up
\	equipment at Energy N.W. while standing by.
1430	Travel to office, paperwork and time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Repko NCO: Snook, Wilkreal HPT: Templeton, Lorenzen FWS: Clark, Lehmann	WEATHER: 96 F, sunny and warm. Winds will be from the northwest at 5-10 mph. DOWNTIME: 1 hr for pre-job 2.5 hr for meeting	DISCARDED ITEMS: 6 sample liners 12 sample caps

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E. Skoglie DATE: 7/22/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7676.		DATE: 07-22-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 124
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

B26CC8

Sample #'s	Interval	%
1. B26D44	16-38	80%
2. B26D55	38-40	95%
3. B26CD0 / B26CD1 / B26CM1	–	–
4. –	–	–

BOREHOLE SUMMARY

Borehole # C7676 Tubing (2 5/8") @ 16' to 72' ft bgs; S.U. 2.3'

Borehole # – Tubing (–)@ – to – ft bgs; S.U. –

Borehole # – Tubing (–)@ – to – ft bgs; S.U. –

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	N/A	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Give New Co-Workers Your Support.
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm, MO524. - stand-by for pre-job
0815	Pre-job, RCTS and sampler on site
0830	Dress into whites, Enter farm, inspect rig, fuel generator,
–	set up shade and misters, install sampler, drive sample #
–	B26D44 at 0907 from 16' to 38', Pulled and processed sample,
–	Shoe = 100%, A = 100%, B = 100%, C = 20%, install dummy tip, drive
–	2 5/8" dual string at C7676 from 16' to 38', pulled dummy tip, installed
–	sampler, drove sample # B26CD0 at 1020 from 38' to 40'.
–	pulled and processed sample, Shoe = 100%, A = 100%, B = 100%, C = 85%,
–	survey out of zone, paperwork
1100	Lunch
1130	Dress into whites, Enter farm, install dummy tip,
	drive 2 5/8" dual string from 40' to 72' BGS
1330	Shut down for - winds over 20 mph sustained, clean-up,
	survey out
1430	Travel to office, paperwork, time cards
1530	End of shift
	N/A

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Repko, Ehrgott NCO: Snook, Villareal HPT: Templeton, Beaumont FWS: Clark, Lehmann	WEATHER: 95 F, sunny and warm. Winds will be from the southwest at 15-25 mpg with higher gusts. DOWNTIME: 1.25 hr for pre-job 1 hr for wind	DISCARDED ITEMS: 6 sample liners 12 liner caps 8 Lynch pins

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D. E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: Dwl E Skoglie DATE: 7/22/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7676.		DATE: 07-26-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 125
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	HHU (CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7676 Tubing (2 5/8") @ 72' to 128' ft bgs; S.U. 2.3'

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Chocking And Blocking.
0645	Travel to "C" Tank Farm.
0715	Onsite at "C" Tank Farm, MO524. stand-by for pre-job, Ace in
0800	Pre-job
0815	Dress into whites, enter farm, inspect rig, fuel generators
\	drive dual string casing at C7676 from ~~48'~~ 72' to 116',
\	letting head cool twice, clean-up and survey out
1130	Lunch
1200	Dress into whites, enter farm. Drive from 116' to 128',
\	begin back pulling dummy tip 75% on 25% off work regime
\	for heat. (15 min. break 1245 to 1200) continue back-pulling
\	dummy tip, put away equipment, survey out.
1345	Exit zone for heat break, inadequate time to return
	and install sampler, (128' = sample interval), paperwork
1430	Travel to office, paperwork, time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Passey NCO: Snook, Villareal, Williams HPT: Lorenzen: O'dell FWS: Clark, Lehmann	WEATHER: 102 F, sunny and warm. Winds will be from the southwest at 5-10 mph. DOWNTIME: .75 hr for pre-job 1 hr for heat breaks	DISCARDED ITEMS: 6 Lynch pins 1 2 5/8" drive head

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E. Skoglie DATE: 7/27/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7676. **DATE:** 07-27-10

LOCATION: "C" Tank Farm, 200 East Area, Hanford | **EXCAVATION:** DAN-3876 **U-DIG #:** 9256038 | **REPORT #:** 126

START CARD NO. SE05741 | **DECOMMISSION NO.** AE07483 | **RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26CM2	128-130	100%
2. \	\	\
3. \	\	\
4. \	\	\

SITE/EQUIPMENT INSPECTION: (Yes) No | HHU CASE# HHU CAT #2 HHUXL#3

BOREHOLE SUMMARY

Borehole # C-7676 Tubing (2 5/8") @ 128' to 130' ft bgs; S.U. .3

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Make The Best Use Of Your First-Aid Kit.
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm, MO524. , stand-by for pre-job
0745	Prejob
0800	Dress into whites, inspect rig, fuel equipment, install sampler # B26CM2, B26CD2, B26CD3, Field bank # B26D56 trip blank # B26D45, Drove sampler from 128' to 130' at 0905 A.M., Pulled and proccessed sample, stand-by for recovery information (100% recovery), survey out.
1100	Lunch
1130	Stand-by for helper, (helper had to leave due to illness)! clean up and secure site Assist at "BY" farm while standing by for helper.
1430	Travel to office, paperwork, time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217
ES SUPPORT: Passey
NCO: Snook, Williams
HPT: Templeton, Bernard, Odell
FWS: Clark, Lehmann

WEATHER: 99 F, Partly cloudy and hot. Winds will be from the southwest at 5-15 mph.

DOWNTIME: .75 hr for prejob
3 hr for helper

DISCARDED ITEMS:
3 sampk liners
6 sample caps

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson
TITLE: *ES TECHNICAL PREPARER*
SIGNATURE: Kelly Olson

REVIEWED BY: D.E. Skoglie
TITLE: *ES TECHNICAL REVIEWER*
SIGNATURE: Dan E Skoglie **DATE:** 7/28/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7676.		**DATE:** 07-28-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 U-DIG #: 9256038	**REPORT #:** 127
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

SITE/EQUIPMENT INSPECTION: (Yes) No

(HHU CASE#1) HHU CAT #2 HHUXL#3

BOREHOLE SUMMARY

Borehole # C7676 Tubing (28") @ 130' to 157 ft bgs; S.U. 1.3'

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Backing Into Trouble.
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm, MO524. Acc in, stand-by for pre-job
0730	Pre-job
0745	Dress into whites, inspect rig, fuel generator, set up shade,
"	install dummy tip, drive dual string casing at C7676 from
"	130' to 157' (final sample depth), clean-up and survey out.
"	(let head cool once).
1115	Lunch.
1145	Dress into whites, Enter farm, pull dummy tip,
"	install sampler to 157' b.gs., clean-up and
	survey out, I.H. took wet bulb reading at work
	area during day, no work regimens implemented.
	clean-up and survey out, inadequate time to
	pull and process final sample.
1330	Stand-by for samplers.
1430	Travel to office, paperwork and time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Steffler *NCO:* Snook, Williams *HPT:* Templeton, Beaumont, Lorenzen *FWS:* Clark, Lehmann	**WEATHER:** 94 F, Partly cloudy and hot. Winds will be from the south at 5-15 mph. **DOWNTIME:** .5 hr for pre-job 1 hr for samplers	**DISCARDED ITEMS:** 2 Lunch pkg

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	**REVIEWED BY:** D.E. Skoglie
TITLE: *ES TECHNICAL PREPARER*	**TITLE:** *ES TECHNICAL REVIEWER*
SIGNATURE: Kelly Olson	**SIGNATURE:** David E. Skoglie **DATE:** 7/29/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Complete sampling activities at #C7676. Begin probe installation and decommissioning at #C7675.		**DATE:** 07-29-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 128
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** (Yes) No	HHU (CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

	Sample #'s	Interval	%
1.	B26CM3	157-159	95%
2.	Shoe =		100%
3.	A =		100%
4.	B =		100%
	C =		80%

BOREHOLE SUMMARY

Borehole # C7676 Tubing (2 5/8") @ 157' to 159' ft bgs; S.U. 1.3, 0
Borehole # C 7676 Tubing (") @ 159' to ft bgs; S.U. 0
Borehole # Tubing ( ) @ to ft bgs; S.U.

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Vehicle Towing—Hitch Receiver Failure.
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm, MO524., stand-by for pre-job,
0730	Pre-job
0745	Dress into whites, enter farm, inspect rig, fuel generator,
	drove sample #B26CM3, + B26CD4 + B26CD5 + Field blank B26D52 +
	trip blank B26D46 at 0840 from 157' to 159', pulled and
	processed sample, stand by for recovery information (.5 hr), recovered
	adequate amount, Back pulled outer 2 5/8" casing from 159' to
	100' bgs., installed granular bentonite to 102', cleaned and capped
	rods, survey out, paperwork.
1200	Lunch
1230	Press into whites, Back pull remaining 100' of 2 5/8"
	tubing to ground surface, clean up and survey out.
1430	Travel to office, paperwork and time card.
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Passey *NCO:* Snook, Williams *HPT:* Templeton, Salizar *FWS:* Clark, Lehmann	**WEATHER:** 97 F, mostly sunny and hot. Winds will be from the south at 5-10 mph. **DOWNTIME:** .5 hr for pre-job .5 hr for sample recovery info.	**DISCARDED ITEMS:** 6 sample caps 3 sample liners 4 '0' rings 10 sacks bentonite

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	**REVIEWED BY:** D.E. Skoglie
TITLE: *ES TECHNICAL PREPARER*	**TITLE:** *ES TECHNICAL REVIEWER*
SIGNATURE: Kelly Olson	**SIGNATURE:** David E. Skoglie **DATE:** 7/30/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Begin probe installation and decommissioning at #C7675.		**DATE:** 07-30-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 U-DIG #: 9256038	**REPORT #:** 129
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** (Yes) No	HHU (CASE#1) HHU CAT #2 HHUXL#3

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7675 Tubing (2 1/2") @ 221' to 216' bgs; S.U. 2.3'
Borehole # \ Tubing ( ) @ \ to \ ft bgs; S.U. \
Borehole # \ Tubing ( ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Electrical Hazards—High Voltage Electrical Burns.
0645	Travel to "C" Tank Farm.
0715	Onsite at "C" Tank Farm, MO524. Currently under AOP 014. (Lightning within 10 miles of tank farms.)
0815	AOP 014 lifted, stand-by for package & pre-job
0915	Pre-job
0930	Dress into whites, move materials for probe installation
\	into C-Farm, inspect rig, fuel generators, clean and
\	cap 2 5/8" tubing from C7676, move and set up on
1100	C7675, Heat regiment 25% coil 75% work at 1100
1115	Break for heat regiment
1130	Finish set-up on C-7675, back pulled one joint
\	from 221' to 216', Tip stayed down and pipe pulled
\	very easy, shut down for camera survey to check for
\	possible breaks in tubing before continuing probe installation.
\	(50/50 heat regiment at 1200) Clean-up and survey out.
1200	Lunch
1230	stand-by for camera survey
1330	Travel to office, paperwork and time cards
1420	End of shift.
	NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Passey *NCO:* Williams, Villarreal *HPT:* Templeton, Beaucard, Lorenzen *FWS:* Clark, Lehmann	**WEATHER:** 96 F, partly cloudy. Thunderstorms in the a.m. Winds from the north at 5-15 mph. **DOWNTIME:** 1 hr for lightening 1 hr for package 1 hr for camera survey	**DISCARDED ITEMS:** 1 2 1/2" expendable tip

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson **TITLE:** *ES TECHNICAL PREPARER* **SIGNATURE:** Kelly Olson	**REVIEWED BY:** D.E. Skoglie **TITLE:** *ES TECHNICAL REVIEWER* **SIGNATURE:** David E. Skoglie **DATE:** 8/2/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Perform camera survey at #C7675.		DATE: 08-02-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 130
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C-7675 Tubing (2½") @ 22.1' to 39' ft bgs; S.U. 1'

Borehole # ____ Tubing (\ )@ \ to \ ft bgs; S.U. \

Borehole # ____ Tubing (\ )@ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Personal Ergonomics.
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm, MO524. ; stand-by for pre-job
0810	Pre-job
0820	Dress in whites, inspect rig, Ran camera survey on
\	C7675, found pipe broken at 96' joint, survey out
0915	stand-by for direction
0930	Receive new direction to decommission hole to first probe interval
\	and set 3 old style probes at 78-76', 38'-36', and 20-18',
\	pick up old style probes at B/C' Farm, return to 'C' Farm, tape
\	probes, check continuity.
1100	Lunch
1130	Dress into whites, back-fill above Top of broken joint with
\	granular bentonite, (Bottom of string = 221' bgs Top = 98.7' bgs
\	(30 pieces of 4'x2½", 1-2½" Box x box 2' long, 1-2½" tip holder, and one tip)
\	Pulled to 71' bgs. installed moisture probe from 76' to 78' bgs
\	sand 79.5' to 78.5, Diatomite 78.5' to 75.5', sand 75.5' to 74.5'
\	installed tremie pipe and hydrated Diatomite and sand with 1.5 gal
\	1420, Pulled Tremie pipe, back-pull 8.5" casing to 39' bgs.
\	clean-up, survey out
1415	Paperwork, travel to office, paperwork and time card
1530	End of shift
	\
	\

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Passey NCO: Snook, Villareal HPT: Templeton, Beaumont FWS: Clark, Lehmann	WEATHER: 93 F, mostly sunny with winds from the southwest at 5-15 mph. DOWNTIME: stand-by for pre-job = 1 hr .25 hr for direction	DISCARDED ITEMS: 30 Joints 2½" x 4 1 joint 2½" x 2 double female 4 sacks bentonite, 1/100' 1 2½" tip holder / old style probe

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E. Skoglie DATE: 8/3/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue probe installation and decommissioning at #C7675.		DATE: 08-03-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 131
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0

SAMPLING SUMMARY

Sample #'s	Interval	%
1.		
2.	NA	
3.		
4.		

SITE/EQUIPMENT INSPECTION: (Yes) No — HHU (CASE#1) HHU CAT #2 HHUXL#3

BOREHOLE SUMMARY

Borehole # C7675 Tubing (2.5") @ 39' to 0' ft bgs: S.U. \

Borehole # \ Tubing (\ )@ \ to \ ft bgs: S.U. \

Borehole # \ Tubing (\ )@ \ to \ ft bgs: S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: PPE—Storage, Maintenance And Care.
0645	Travel to "C" Tank Farm.
0715	Onsite at "C" Tank Farm, MO524. , stand-by for pre-job
0800	Pre-job
0815	Dress into whites, enter farm, inspect rig, back pull 2½" casing
"	from 39' to 32', install second moisture probe 36' to 38' bgs,
"	sand 39.5' to 38.5' Diatomite 38.5 to 35.5, sand 35.5 to 34.5, install
"	1.5 gal H2O via Tremie pipe, pull tremie back-pull casing to 13' bgs,
"	install granular bentonite to 21.5', install third moisture probe 18' to
"	20', sand 21.5' to 20.5', Diatomite 20.5 to 17.5', sand 17.5' to 16.5',
"	granular bentonite to surface, pulled remaining 2½" casing, pick-up
"	and survey out, pick up materials for installing flush mount surface
"	protections.
1130	Lunch
1200	Enter farm, move rig casing and all other support
"	equipment to middle gate to be surveyed out of "C" farm,
"	Bessed up trash, clean up and survey out.
1430	Travel to office, paperwork and time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Passey NCO: Sanok, Villareal HPT: Templeton, Beernard FWS: Clark, Lehmann	WEATHER: 95 F, mostly sunny with winds from the west at 5-15 mph. DOWNTIME: .75 hr for pre-job	DISCARDED ITEMS: 1 - 50' old style probe 1 - 100' old style probe 4 sacks bentonite 1 sack gravel 1 4' x 2½" cap

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Ol	SIGNATURE: David E Skoglie DATE: 8/4/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Begin probe installation and decommissioning at #C7679.		DATE: 08-04-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 132
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: Yes No	HHU CASE#1 HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7679 Tubing (2.5") @ 222' to 1 ft bgs; S.U. 1

Borehole # \ Tubing (\ @ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Sunglasses Vs. Safety Glasses.
0640	Travel to "C" Tank Farm.
0710	Onsite at "C" Tank Farm, MO524., stand-by for pre-job
0755	Pre-job
0815	Gather materials for surface protection installation, and setting up
"	temporary RBA to survey out rig and equipment, Set up
"	temporary RBA, Moved rig out and surveyed rig and equipment
"	out. installed surface protections on C-7667, C7669, C7671,
"	C7675 and C7471, survey out remaining equipment, clean-up
	and survey out.
1200	Lunch
1230	Move rig, generators and equipment to C-7679
	outside 'C' farm, set up rig and zone.
1400	stand-by for air samplers
1430	Travel to office, paperwork, time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Passey NCO: Snook, Villareal HPT: Templeton, Bernard, Lorenzen FWS: Clark, Lehmann	WEATHER: 95 F, mostly sunny with winds from the west at 5-10 mph. DOWNTIME: .75 hr for pre-job .5 hr for air samplers	DISCARDED ITEMS: 6 sacks concrete mix 5 surface protections

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: Dan E Skoglie DATE: 8/5/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Begin probe installation and decommissioning at #C7679.		DATE: 08-05-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 133
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION (Yes) No	HHU (CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C-7679 Tubing (2.5") @ 222' to \ ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.		
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: What To Do About "Near Misses".
0630	Travel to "C" Tank Farm.
0700	Onsite at "C" Tank Farm, MO524. , gather materials for probe installation,
	check measurements, continuity
0830	stand-by for package, maintence on rig, unload materials
	at chem-storage while standing by for package
1130	Lunch
1200	Continue stand-by for package, clean-up
1300	Package on site with air sampler requirement removed,
	Pre-job
1330	Change out inserts on foot clamps, inadequate time
	to begin probe installation
1430	Travel to office, paperwork, time cards, move De-con trailer to EN.
1530	End of shift

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Passey NCO: Villareal HPT: Bernard, Templeton FWS: Clark, Lehmann	WEATHER: 97F, mostly sunny with winds from the west at 5-10 mph. DOWNTIME: 6 hr for package	DISCARDED ITEMS: 4 jaw inserts 2 insert holders

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E Skoglie DATE: 8/9/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Begin probe installation and decommissioning at #C7679.		DATE: 08-09-10
LOCATION: "C" Tank Farm, 200 East Area. Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 134
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.		
2.	NA	
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7679 Tubing (2.5") @ 222' to 40' ft bgs; S.U. 2'

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: General Safety---Attitude And Behavior.
0630	Travel to 'C' farm
0700	Arrive at 'C' farm, stand-by for pre-job
0800	Pre-job
0830	inspect rig, finish set up & zone to RBA, pick up arm sheaves,
\	Tag hole, Pulled one joint of 2.5" casing from 176' (broken casing,
\	verified by camera survey and tag tape) to 148', install bentonite to
\	157.5', sand to 156.5, bottom of Probe 156', Diatomite to 153.5,
\	sand to 152.5, install 1 gal H20 via tremie, pull tremie, back pull
\	casing to 138', install bentonite to 137.5, sand to 136.5', Diatomite to 133.5'
\	sand to 132.5', (2nd probe at 134-136) install tremie and 1 gal h20,
\	survey out.
1130	~~Survey~~ K.O. ~~out~~ K.I. Lunch
1200	Back-pulled casing to 108', install bentonite to 117.5, sand to 116.5,
	Diatomite 116.5 - 113.5, sand 113.5 - 112.5 (probe bottom = 116') install
	tremie and one gal. H20 via tremie, pulled tremie, Pulled 2½"
	casing to 88', install bentonite to 97.5, sand to 96.5 Diatomite
	to 93.5', sand to 92.5' (Probe bottom = 96') installed tremie pipe
	and one gal H20 via tremie, pulled tremie, clean-up
	and survey out. (casing left in hole = 11 Joints and
	one 2.3' bottom assembly, top of broken pipe = 176' BGS, Bottom
	= 222.3' Bgs.)
1430	Travel to office, paperwork, time cards
1530	End of Shift

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Passey NCO: Snook, Villareal HPT: Templeton, Barnard FWS: Clark, Lehmann	WEATHER: 95F, mostly sunny with winds from the southwest at 5-10 mph. DOWNTIME: 1 hr for pre-job	DISCARDED ITEMS: 1-160' multi-level probe 5-sacks bentonite 1-sack sand 1-sack Diatomite 11 joints 2.5"x4, 1-Bottom assembly + Tip

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E Skoglie DATE: 8/10/10

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200 FT MULTILEVEL RESISTIVITY PROBE WORK SHEET

BOREHOLE NO: C-7679

AB 12/6/10

DIMENSIONS	PRELIMINARY AS-BUILT		CONSTRUCTION MATERIAL TAG
PLANNED 156' — TD	ACTUAL		"Sand" MATERIAL includes 3 diatomite TAG 15' above tactical probes
			SURFACE PROTECTION CASING
			Bentonite from ___ to ___
-20 ft-	- ft-		Sand from ___ to ___
			Bentonite from ___ to ___
-40 ft-	- ft-		Sand from ___ to ___
			Bentonite from 37.5 to 1
-60 ft-	H blue 34 - 36 ft-	2	Sand from 37.5 to 32.5
		18	Bentonite from 52.5 to 32.5
-80 ft-	H. brown 54 - 56 ft-	2'	Sand from 72.5 to 52.5
		18'	Bentonite from 72.5 to 52.5
-100 ft-	orange 74 - 76 ft-	2	Sand from 77.5 to 72.5
		18	Bentonite from 92.5' to 77.5
-120 ft-	~~Orange~~ Green 94 - 96 ft-	2'	Sand from 97.5 to 92.5'
		18'	Bentonite from 112.5 to 97.5
-140 ft-	L.B ~~Green~~ Blue 114 - 116 ft-	2'	Sand from 117.5 to 112.5
		18'	Bentonite from 132.5' to 117.5'
-160 ft-	Blue Brown 134 - 136 ft-	2'	Sand from 137.5 to 132.5
		18.5	Bentonite from 152.5 to 137.5
-180 ft-	L.B Brown 154 - 156 ft-	1.5'	Sand from 157.5 to 152.5
			Bentonite from 222' to 157.5
			TOTAL DEPTH

NOTE: Reisitivity Prove measurements are to the bottom of the probe

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue probe installation and decommissioning at #C7679.		**DATE:** 08-10-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 U-DIG #: 9256038	**REPORT #:** 135
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7679 Tubing (2½") @ 86' to 0' ft bgs; S.U. —

Borehole # — Tubing (—)@ — to — ft bgs; S.U. —

Borehole # — Tubing (—)@ — to — ft bgs; S.U. —

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: General Safety---Controlling Stress.
0630	Travel To C-Farm
0645	Arrive at C-Farm, stand by for Pre-Job
0800	Pre-Job
0830	Inspect rig and setup
0840	Back Pull From 86' to 72' Install Bentonite to 77.5' add sand from 76.5' to 73.5', add sand from 72.5' add one gal. H2O
09:40	Backpull From 72.5' to 50.5' bgs Install Bentonite From 72.5' to 57.5' add sand from 57.5' to 56.5' add Diatomite Earth from 56.5' to 51.5' add sand From 51.5' to 50.5'
10:00	Back Pull From 50.5' to 30.5' bgs add Bentonite From 50.5' to 37.5' add sand From 37.5' to 36.5' add Diatomite Earth From 36.5' to 33.5' add sand From 33.5' to 32.5'
10:40	Back Pull From 32.5' to 0' add Bentonite From 32.5' to 0'
11:30	Lunch
12:00	on Hold for Probe placement Depths
14:15	Travel to office Paper work & Time cards
15:30	End of Shift
	NA

OPERATOR/LICENSE: Walkup/3005 *ES SUPPORT:* Passey *NCO:* Snook, Villareal *HPT:* Bernard, Templeton *FWS:* Clark	**WEATHER:** 85F, partly cloudy with winds from the southwest at 5-10 mph. **DOWNTIME:** 3.5hrs.	**DISCARDED ITEMS:** 1-4'x2.5' Pipe 4-Bags Bentonite

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Mike Passey **TITLE:** *ES TECHNICAL PREPARER* **SIGNATURE:**	**REVIEWED BY:** D.E. Skoglie **TITLE:** *ES TECHNICAL REVIEWER* **SIGNATURE:** David E Skoglie **DATE:** 8/12/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Begin probe installation and decommissioning at #C7681.		**DATE:** 08-11-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 136
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole #C-7681 Tubing (2.5") @ 222' to 204 ft bgs; S.U. 2.3'

Borehole # ___ Tubing ( ) @ ___ to ___ ft bgs; S.U. ___

Borehole # ___ Tubing ( ) @ ___ to ___ ft bgs; S.U. ___

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Hazard Awareness---The Little Things Count.
0630	Travel to BY farm and check storage, pick up materials, travel to 'C' farm
0715	arrive at 'C' farm, stand by for pre job
0800	Pre-job
0815	Tape up probe, move rig from C-7679 to C7681,
"	begin set-up.
0915	Stand-by for vapors AOP-15
1215	AOP-15 lifted, Lunch
1245	Finish set up, back pull 2½" casing from 222'
"	to 204', cleared 1.5' of fill out of casing.
"	Survey out
1430	Travel to office, paperwork and time cards
1530	End of shift

NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Passey *NCO:* Snook, Villareal *HPT:* Templeton, Caballero *FWS:* Clark, Lehmann	**WEATHER:** 87F, partly cloudy with winds from the west at 5-15 mph. **DOWNTIME:** .75 hr for pre job 3 hr for vapors AOP15	**DISCARDED ITEMS:** 1 expendable tip 3 bags bentonite

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	**REVIEWED BY:** D.E. Skoglie
TITLE: *ES TECHNICAL PREPARER*	**TITLE:** *ES TECHNICAL REVIEWER*
SIGNATURE: Kelly Olson	**SIGNATURE:** David E. Skoglie **DATE:** 8/12/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue probe installation and decommissioning at #C7681.		DATE: 08-12-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 137
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7681 Tubing (2.5") @ 204' to 100' ft bgs; S.U. 2.3

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: General Safety—Shift Work.
0610	Travel to 'C' farm
0640	arrive at 'C' farm, stand-by for Pre-job.
0730	pre-job
0745	inspect rig, back-pull casing from 204' to 140', install bentonite
\	to 147.5', sand to 146.5', distonite 146.5 to 143.5', sand to 142.5' (bottom
\	of Probe = 146') install tremie and one gal H20, survey out
1000	Stand-by for RCT coverage while RCT escorted Mike Dorsey
	and group into 'C' farm to evaluate future site and locate boring locations
	with GPS.
1200	Lunch
1230	Pull tremie pipe, Back pull casing to 120', install bentonite to
	128.5, sand to 127.5, Bictonite to 124.5, sand to 123.5 (Probe #2 bottom
	at 125-127') install tremie and 1 gal H20, Pull tremie, back pull casing
	to 100', install bentonite to 108.5, sand - 107.5, Distonite 104.5, sand
	103.5, (Probe #3 bottom 105-107' bgs) install tremie pipe and 1 gal
	H20, pull tremie, secure site and survey out
1430	Travel to office, paperswork, time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Weakley NCO: Snack, Villarreal HPT: Templeton, caballero FWS: Clark	WEATHER: 91F, mostly sunny with winds from the southwest at 10-20 mph. DOWNTIME: .75 hr for pre-job 2 hr for RCT coverage	DISCARDED ITEMS: 1 - 160' multi-level probe 5 - sacks bentonite 1 - sack 20/40 sand 1 - sack distonite

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D. E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E. Skoglie DATE: 8/13/10

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200 FT MULTILEVEL RESISTIVITY PROBE WORK SHEET

BOREHOLE NO: C-7681

HB 12/6/10

DIMENSIONS PLANNED	PRELIMINARY AS-BUILT ACTUAL	CONSTRUCTION MATERIAL/TAG MATERIAL	TAG
0 ft			
-20 ft-	- ft-	Bentonite from ___ to ___	
		Sand from ___ to ___	
		Bentonite from ___ to ___	
-40 ft-	- ft-	Sand from ___ to ___	
		Bentonite from 22.5 to -1	
-60 ft-	Lt Blue 25 - 27 ft-	Sand from 28.5 to 23.5	
	2	Bentonite from 43.5 to 28.5	
	15		
-80 ft-	Lt-brown 45 - 47 ft-	Sand from 48.5 to 43.5	
	2	Bentonite from 63.5 to 48.5	
	15		
-100 ft-	orange 65 - 67 ft-	Sand from 68.5 to 63.5	
	2	Bentonite from 83.5 to 68.5	
	15		
-120 ft-	Green 85 - 87 ft-	Sand from 98.5 to 93.5	
	2	Bentonite from 103.5 to 88.5	
	15		
-140 ft-	Blue 105 - 107 ft-	Sand from 108.5 to 103.5	
	2	Bentonite from 123.5 to 108.5	
	15		
-160 ft-	Brown 125 - 127 ft-	Sand from 128.5 to 123.5	
	2	Bentonite from 143.5 to 128.5	
	17.5	Sand from 147.5 to 142.5	
-180 ft-	144 - 146 ft-		
	1.5	Bentonite from 232 to 147.5	
		TOTAL DEPTH	

NOTE: Relsitivity Prove measurements are to the bottom of the probel

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue probe installation and decommissioning at #C7681.		**DATE:** 08-13-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 138
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** Yes (No)	(HHU CASE#) HHU CAT #2 HHUXL#3

Sample #'s	Interval	%
1.		
2.		
3.		
4.		

NA

BOREHOLE SUMMARY

Borehole # C 7681 Tubing (2.5") @ 100' to ~ ft bgs: S.U. ~

Borehole # _____ Tubing ( ) @ to ft bgs: S.U. ___

Borehole # _____ Tubing ( ) @ to ft bgs: S.U. ___

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.		
2.		
3.		

NA

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Basic Machine Safety.
06:30	Travel to 'Smurf' and CHAT training
11:30	Lunch
12:00	Pick up supplies, travel to office, paperwork and time cards
1430	End of shift

NA

OPERATOR/LICENSE: Olson/1217
ES SUPPORT: Passey
NCO: Snook, Vilhauer
HPT: Templeton; Clayton
FWS: Clark

WEATHER: 93F, mostly sunny with winds from the north at 10-15 mph.

DOWNTIME: NA

DISCARDED ITEMS: NA

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson
TITLE: *ES TECHNICAL PREPARER*
SIGNATURE: Kelly Olson

REVIEWED BY: D.E. Skoglie
TITLE: *ES TECHNICAL REVIEWER*
SIGNATURE: Daniel E Skoglie **DATE:** 8/16/10

10/06/09 Rev 1

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue probe installation and decommissioning at #C7681.		DATE: 08-16-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 139
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C-7681 Tubing (2.5") @ 100' to 0' ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ to ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Site/Housekeeping review by ESFS Safety.
0630	Travel to "C" farm
0700	Arrive at "C" farm, gee in, stand-by for pre-job
0815	Pre-job.
0830	inspect rig, post site as RBA, pull casing from 100' to 80',
\	install bentonite to 88.5, sand-87.5', Diatomite 84.5, sand-83.5'
\	(probe bottom = 87') install tremie and one gal H20, pull tremie,
\	pull casing from 80' to 60', install bentonite to 68.5', sand-67.5',
\	Diatomite ~64.5', sand 63.5' (Probe bottom = 67') install tremie and
\	1 gal H20 via tremie Took water break, Pull tremie, back-pull
\	casing to 40', install bentonite to 48.5, sand-47.5, Diatomite-44.5,
\	sand-43.5 (bottom of probe = 47' bgs) install tremie pipe, add 1 gal
\	H20 via tremie, Clean-up and survey out.
1130	Lunch
1200	Pulled tremie pipe, back-pulled casing to 20' bgs, install
	bentonite to 28.5', sand-27.5', Diatomite-24.5', sand-23.5',
	(Probe bottom = 27') install tremie pipe and one gal H20, pull
	tremie and remaining 20' of casing, cleaned and bagged
	casing. (75% work 25% rest at 1315)
1330	Stand-by for surface sample at C-7682, clean-up
	while standing by
1430	Travel to office, paperwork and time cards
1530	End of shift

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Passey NCO: Williams, Snook HPT: Templeton, Bernard FWS: Clark, Lehmen	WEATHER: 99F, mostly sunny with winds from the southwest at 5-10 mph. DOWNTIME: 1.25 hr for pre-job 1 hr for surface sample	DISCARDED ITEMS: 5 sacks bentonite

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E Skoglie DATE: 8/17/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Begin sampling activities at #C7682.		**DATE:** 08-17-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 140
START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION** (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1. (C7682)	0-1'	100%
2. B26L20 ? B26M9 ?	\	\
3. \	\	\
4. \	\	\

BOREHOLE SUMMARY

Borehole # C-7682 Tubing (2 5/8") @ 0' to 5' ft bgs; S.U. 1,3'
Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \
Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Extreme Heat Is Here!
0630	Travel to 'C' farm, stand by for RCT and pre-job
0730	Pre-job
0745	Dress into whites, enter 'C' farm, load 2 5/8" rod into Lynch-bag
\	to move outside farm for sampling, survey rod out and move to
\	C-7682, begin surface sampling at C-7682 Took sample # B26L20,
\	B26M9, B26M0, Dups - B26CN0, B26L11, B26M1, Field blank - B26Y1, B26Y2
\	Trip blank - B26CX1 0-1, processed samples, move rig and set up
\	on C7682, drove 2 5/8" dual wall to 5' (first sample interval).
1100	Stand-by for samplers, clean-up
1130	Lunch
1200	Continue stand-by for samplers, wash pick-up
	and clean up while standing by
1420	Travel to office paperwork and time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Pappey *NCO:* Shook, Villareal *HPT:* Templeton Barnard *FWS:* Clark Lehmann	**WEATHER:** 101F, very sunny with winds from the south at 10 mph. **DOWNTIME:** 1 hr for pre-job 3 hr for samplers support	**DISCARDED ITEMS:** N/A

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	**REVIEWED BY:** D.F. Skoglie
TITLE: *ES TECHNICAL PREPARER*	**TITLE:** *ES TECHNICAL REVIEWER*
SIGNATURE: Kelly Olson	**SIGNATURE:** David E Skoglie **DATE:** 8/18/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7682.		DATE: 08-18-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 141
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	HHU (CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26C47	5-7'	85%
2. B26C49	10'-12'	25%
3. B26C51	12'-14'	100%
4. \	\	\

BOREHOLE SUMMARY

Borehole # C-7682 Tubing (2 5/8") @ 5' to 14' ft bgs; S.U. 3

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Trying To Do The Job Alone.
0615	Travel to 'C' farm, ~~stand-by~~ KO
0645	Arrive at 'C' farm, stand-by for pre-job
0745	Pre-job
0800	Inspect rig, pull dummy + install sampler B26C47 - B26CF1 - B26C45
\	and B26CY3 at 0843 from 5'-7', back pull sampler, stand-by for recovery,
\	recovery = Shoe 50%, A - 80%, B 100%, C - 100%, install dummy tip, drive
\	to second sample interval of 10', pull dummy tip, install sampler,
\	drove sample B26C49, B26C50, B26CY4, B26CF2, B26CX2 at 1000
\	from 10-12', stand by for recovery, Recovery = Shoe 100%, A, B, + C liners
\	empty, (Rock chip blocked off shoe), install third sampler and
\	drive sample # B26C51, B26C52, at 1107 from 12' to 14', pulled
\	sampler, stand-by for recovery results, recovery = Shoe 100%, A - 100%, B - 100%
\	and C = 100%, finished processing sampler, survey out.
1200	Lunch
1230	Stand-by for sample support, (sampler said insufficient time for
	14-16 sample) clean-up and secure site.
1430	Travel to office paperwork and time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Ehrgott NCO: Sauk, Villarreal HPT: Templeton, Bernard, Boyle, Boyer FWS: Lehmann	WEATHER: 93 F, mostly sunny with winds from the southwest at 10-20 mph. DOWNTIME: 1 hr for pre-job 2 hr for sampling support	DISCARDED ITEMS: 9 sample liner 18 caps 12 6" rings

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E. Skoglie DATE: 8/19/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7682.		DATE: 08-19-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 142
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26C53	14'-16'	100%
2. B26C55	18'-20'	100%
3. \	\	\
4. \	\	\

SITE/EQUIPMENT INSPECTION: (Yes) No

HHU (CASE#1) HHU CAT #2 HHUXL#3

BOREHOLE SUMMARY

Borehole # C7682 Tubing (2 5/8") @ 14' to 45 ft bgs; S.U. 1.3'

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: General Safety---Safety And Your Supervisor.
0630	Travel to 'C' farm
0700	Arrive at 'C' farm, stand-by for RCTs
0745	Pre-job
0800	Inspect rig, set up shade, install sampler, drive sample #4,
\	# B26C53, B26C54, B26CF4, Trip blank- B26CX3, Field blank B26CY5
\	from 14' to 16' at 0853, Pulled sample, stand-by for recovery,
\	recovery = 100% shoe, A,B,C Liners = 100%, install dummy tip, drive
\	2 5/8" rod to 18', Pull dummy tip, install sampler to depth,
\	drive sample #5, #B26C55, B26C56, B26CF5, Field blank #2 B26CY6,
\	from 18'-20' at 1015, Pulled sample, stand-by for sample results,
\	results = 100% -shoe, A,B,+C liners = 100%, clean-up and survey
\	out.
1130	Lunch
1300	install dummy tip and drive to #6 sample interval
	of 45', secure site and down-post to RMA for weekend.
1300	Lost RCT coverage and samplers
~~1430~~ KO	stand-by for RCT coverage and sampler support,
1430	Travel to office, paperwork and time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Passey NCO: Williams, Smock, Villarreal HPT: Barnard, Clayton, FWS: Lehmann	WEATHER: 90 F, mostly sunny with winds from the southwest at 10-20 mph. DOWNTIME: .75 hr for RCTs 1 hr for RCTs and samplers	DISCARDED ITEMS: 6 sample liners 12 sample caps 4 Lynch Pins

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoghi
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E. Skoghi DATE: 8/23/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7682.		DATE: 08-23-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 143
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26C57	45'-47'	100 %
2.		
3.	NA	
4.		

SITE/EQUIPMENT INSPECTION: Yes No — HHU CASE#1 HHU CAT #2 HHUXL#3

BOREHOLE SUMMARY

Borehole # C-7682 Tubing (2 5/8") @ 45' to 88' ft bgs; S.U. 2.3'

Borehole # \ Tubing (\ )@ \ to \ ft bgs: S.U. \

Borehole # \ Tubing (\ )@ \ to \ ft bgs: S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: General Safety---Unsafe Acts.
0630	Travel to 'C' farm
0700	Arrive at 'C' farm, Acc in, Problems zeroing pencil diameter
0900	Pre-job
0915	Inspect rig, set up shade etc., pull dummy tip, install sampler, drive sample #B26C57, -B26C58, B26CF6, (Field blank - B26CY7, and trip blank - B26CX5, from 45' to 47' at 0915, stand-by for recovery, recovery = shoe = 100%, A, B, + C liners = 100%,
1000	Down-size RBA to avoid putting Red stickers on equipment.
1030	Install dummy tip, drive 2 5/8" rod from 47' to 72'
1200	Lunch
1230	Drive 2 5/8" rod from 72' to 88', (next sample interval), back pull dummy tip.
1330	Stand-by for sampling support
1430	Travel to office, paperwork, time cards
1530	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Passey NCO: Williams, Shook HPT: Templeton, Barnard FWS: Lehmann	WEATHER: 82 F, mostly sunny with light and variable winds. DOWNTIME: 1 hr for samplers	DISCARDED ITEMS: 3 sample liners 6 sample caps 6 Lynch pins

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly, Alan	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly A	SIGNATURE: David E. Skoglie DATE: 8/24/10

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ENERGY SOLUTIONS, WESTERN OPERATIONS

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7682.		DATE: 08-24-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 144
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	HHU (CASE#1) HHU CAT #2 HHUXL#3

Sample #'s	Interval	%
1. B26C59	88-90	100%
2. \	\	\
3. \	\	\
4. \	\	\

BOREHOLE SUMMARY

Borehole # C-7682 Tubing (2 5/8") @ 88' to 122 ft bgs: S.U. .3'

Borehole # \ Tubing (\ ) @ \ to \ ft bgs: S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs: S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1. \	NA	\
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Fueling Operations & Static Electricity.
0630	Travel to 'C' farm
0700	Arrive at 'C' farm, stand by for RCTs, sample support, and auditors
0800	Pre-job
0845	Inspect rig, post zone, install sampler to 88', drive sample
\	# B26C59, B26C60, B26CF7, Field blank- B26CY8, trip blank B26CX1
\	at 0950' from 88-90', pulled sampler, stand-by for recovery
\	recovery = 100% - shoe 100% A, B, + C liners, install dummy
\	tip, survey out.
1130	Lunch
1200	Drive from 90' to 122', pulled dummy tip
\	survey out.
1430	Travel to office, paperwork, timecards
1530	End of shift

NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Passey NCO: Villareal, Williams, Roberts HPT: Templeton, Bernard. FWS: Lehmann	WEATHER: 88 F, mostly sunny with light and variable winds. DOWNTIME: 1 hr for personnel to arrive for pre-job	DISCARDED ITEMS: 3 sample liners 6 sample caps 4 Lynch pins

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: DE. S Koglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E Shoglie DATE: 8/25/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7682.		DATE: 08-25-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 145
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: Yes No	HHU CASE#1 HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26C61	122-124'	95%
2. \	\	\
3. \	\	\
4. \	\	\

BOREHOLE SUMMARY

Borehole # C-7682 Tubing (2 5/8") @ 122' to 124' ft bgs; S.U. 2.3"

Borehole # C-7682 Tubing (2 5/8") @ 124' to 0' ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: PPE---Picking The Proper Glove.
0630	Travel to C' farm
0700	Arrive at "C" farm, stand-by for RCTs
0800	Pre-job
0815	inspect rig, post RBA around work area, install sampler,
"	drive sample #B26C61, B26C62, B26CF8, Field blank - B26CY9,
"	and trip blank B26CX6 at 0920 from 122' to 124', back-pulled
"	sampler and awaited recovery data, recovery is 75% - Shoe,
"	100% A, B, and C liners, back pulled outer 2 5/8" casing from
"	122' to 76', survey out.
1145	Lunch
1215	Back pulled remaining 76' of 2 5/8" casing, clean-up, down-post.
1400	stand-by for surface sample
1430	Travel to office, paperwork and time cards
1530	End of shift

NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Passey NCO: Williams, Smith, HPT: Templeton, Barnard, Clough FWS: Lehmann	WEATHER: 99 F, very sunny and hot with light and variable winds from the north. DOWNTIME: 1 hr for RCTs for pre-job	DISCARDED ITEMS: 3 sample liners 6 sample caps 6 'O' rings 6 sacks bentonite crumbles 2 sacks " " chips

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Shoghi
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Ol	SIGNATURE: David E Shoghi DATE: 8/26/10

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ENERGY SOLUTIONS
HYDRAULIC HAMMER MAINTENANCE/INSPECTION CHECKLIST

Date: 8/25/10 HHU#: 1 Hour Meter: 3214 Operator Olson

Daily Maintenance Inspection	Good	Correction Needed
1. Clean & inspect feed rails.	✓	
2. Inspect welds, pins and subs for cracks and/or failure points.	✓	
3. Remove rocks and debris from inside the feed structure.	✓	
4. Grease the drive head.	✓	
5. Wipe down the cylinder rod.	✓	
6. Check drive chain tension.	✓	
7. Grease front and rear sprockets.	✓	
8. Check hydraulic hoses for damage and leaks.	✓	
9. Inspect rotary head to ensure it's secure and operating correctly.	✓	
10. Inspect belts and safety guards.	✓	
11. All safety labels are legible.	✓	
12. Emergency STOP and switches are in good operating condition.	✓	
13. Inspect fluid levels.	✓	
14. Fire extinguishers are operational and current on inspection.	✓	
15. Break out wrench and heel and jaws are in good working order.	✓	
16. Visually check hoist. Spool out and inspect rope on hoist.	✓	
17. Check winch for leaks. Clean and grease brake assembly if needed.	✓	
18. Check brakes and back up alarm.	✓	
19. Check tracks, rollers, tires etc.	✓	

COMMENTS:

NO UNAUTHORIZED PERSON(S) IN HHU AREA !!!!!
HYDRAULIC HAMMER UNIT SPECIFICATION INFORMATION

A rod fed hydraulic cylinder provides the force to retract and extend the drill head. Retracting the cylinder moves the drill head forward on the feed. Extending the cylinder retracts the drill.

The drilling feed force is 320 IBF (147 kilogram force) per 100 psig (6.8 bar) up to a maximum of 8100 IBF (3580 kg-f) at 2500 psig (170 bar) Retraction force out of the hole is 480 IBF (218 kg-f) per 100 psig (6.8 bar) up to a maximum 12,000 IBF (5466 kg-f) at 2500 psig (170 bar). NOTE: Do not exceed 2500 psig (170bar) during retraction of the drill head or bowing of the drill head may occur.

HCFH feeds are designated by length and application. HBM5012 designates a feed having 5 feet (1.524 m) of total drill head travel. This allows the use of 4 foot (1.219 m) drill pipe.

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Begin sampling activities at #C7680.		DATE: 08-26-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 146
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26JK9, B26JK8	0-1	100%
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C-7680 Tubing (2 3/4") @ 0' to 1' ft bgs: S.U. ✓

Borehole # ✓ Tubing ( ) @ to ft bgs: S.U.

Borehole # ✓ Tubing ( ) @ to ft bgs: S.U.

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Using Portable Fire Extinguishers.
0630	Travel to 'C' farm
0700	Arrive at 'C' farm, stand-by for RCTs
0800	Pre-job
0815	Take surface sample at C-7680, install surface protection at C-7681 surface sample # = B26CW2, B26CV1, B26CM8, B26JK9 B26JL9, B26JK8, B26JL8, B26CM7 move rig and set up on C-7680 move pipe with fork-lift, move support equipment, down-post zone
1000	Stand-by for sampling support and windy conditions,
	work on HHU #2 while standing by
1200	Lunch
1230	Continue stand-by for wind and sample support, return dump truck while standing by
1530	End of shift

NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Passey NCO: Snook, Williams HPT: Templeton, Barnard, Clough FWS: Lehmann	WEATHER: 89 F, partly cloudy. Winds from the southwest at 15-25 mph with higher gusts. DOWNTIME: 1 hr for RCT, 5 hr for wind and sample support	DISCARDED ITEMS: 1 10" surface protection 1 sack - quick-crete

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E. Skoglie DATE: 8/27/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7680.		**DATE:** 08-27-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 147

START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** Yes / No	HHU CASE#1 / HHU CAT #2 / HHUXL#3

Sample #'s	Interval	%
1. B26-C26	5-7	85%
2. \	\	\
3. \	\	\
4. \	\	\

BOREHOLE SUMMARY

Borehole # C-7680 Tubing (2 5/8") @ 1' to ft bgs; S.U. ____

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Individual Quality Makes The Difference.
0615	Travel to 'BY' farm
0645	Arrive at 'BY' farm, stand by for security drill, safety drill work on HHU #2 while standing by
1045	Lunch
1115	Drill ends, Return to 'C' farm, Pre-job
1145	Inspect rig, drive 2 5/8" tubing to 5', pull dummy tip, stand-by for sample preparation, install sampler, drive sample #B26C26, B26C27, B26CH1, Trip blank - B26CU2 and field blank B26CW3 at 1307 from 5' to 7', pull and process samples. Recovery = Shoe = 50%, A in B liners = 100%, C-liner = 90%, survey out and downpost zone
1330	Travel to office, paperwork, and time cards
1430	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Passey *NCO:* Williams, Snook, Villareal *HPT:* Templeton, Clough *FWS:* Lehmann	**WEATHER:** 78 F, partly cloudy. Winds from the southwest at 5-15 mph. **DOWNTIME:** 4 hrs for drill	**DISCARDED ITEMS:** 3 sample liners 6 sample caps 4 'O' rings

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	**REVIEWED BY:** D.F. Skoglie
TITLE: *ES TECHNICAL PREPARER*	**TITLE:** *ES TECHNICAL REVIEWER*
SIGNATURE: Kelly Olson	**SIGNATURE:** Dan F. Skoglie **DATE:** 8/30/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7680.		DATE: 08-29-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 148
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

Sample #'s	Interval	%
1. B26C28	10-12	70%
2. B26C30	14-16	100%
3. B26C32	17-19	100%
4. \	\	\

BOREHOLE SUMMARY

Borehole # C-7680 Tubing (2 5/8") @ 7' to 19 ft bgs: S.U. ____

Borehole # \ Tubing (\ ) @ \ to \ ft bgs: S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs: S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

WORK SUMMARY

TIME	WORK SUMMARY
0530	Safety meeting at office. Topic: Come-A-Longs and Chain Hoist Safety. Travel to 'Sneff' bldg.
0600	Arrive at 'sneff', change location to 'C' farm for pre-job, stand-by for pre-job
0715	Pre-Job
0730	Inspect rig, install dummy tip, drive 2 5/8" casing to 10',
\	Pull dummy tip, install sampler, drove sample # B26C28,
\	B26C29, B26CH2, Field blank - B26CW4, and trip blank
\	B26CV3 at 0810 from 10-12', stand-by for recovery, recovery =
\	80% - shoe 100% A+B liner 0% C-liner, install dummy tip, drove
\	to 14' (next interval, Pulled dummy tip, installed sampler drove sample
\	#B26C30, B26C31, B26CW5 and Field blank #B26CW5
\	at 0920 from 14'-16', stand-by for recovery, recovery = 100%
\	install dummy tip drive to 17', pull dummy tip, install
\	sampler, Drive sample # B26C32, B26C33, B26CH4 and
\	field blank B26CW6 at 1040 from 17-19', pulled sample,
\	stand-by for recovery, Recovery = 100%, Clean up site,
\	drop pottings, and survey out
1200	Travel to office, stand-by for sampling supplies,
\	Paperwork and time cards
1400	End of shift
	NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Wolkup NCO: Williams, Snook HPT: Templeton, Kline FWS: Lehmann	WEATHER: 78 F, partly cloudy. Winds from the southwest at 5-10 mph. DOWNTIME: 1.25 hr for pre-job (RCRS and samplers) 1 hr for sampling equipment.	DISCARDED ITEMS: 9 sample liners 18 sample caps 6 O' rings 4 Lynch pins

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David Skoglie DATE: 8/30/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7680.		**DATE:** 08-30-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	**EXCAVATION:** DAN-3876 **U-DIG #:** 9256038	**REPORT #:** 149

START CARD NO. SE05741	**DECOMMISSION NO.** AE07483	**RWP:** CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	**SITE/EQUIPMENT INSPECTION:** Yes No	HHU CASE#1 HHU CAT #2 HHUXL#3

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C7680 Tubing (2 5/8") @ 19' to 43 ft bgs: S.U. 33'
Borehole # \ Tubing (\ ) @ \ to \ ft bgs: S.U. \
Borehole # \ Tubing (\ ) @ \ to \ ft bgs: S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: ESFS Safety Presentation—Vehicle Towing Assessment.
0645	Travel to 'C' farm, Acc. in
0715	Arrive at 'C' Farm, stand-by for RCTS & pre-job
0800	Pre-job
0815	Inspect rig, Drive 2 5/8" tubing from 15' to 42', broke drive head
1015	Survey out, Travel to BY farm, pick-up new drive-head and return
1045	Install new-head and drive from 42' to 43' (sample depth)
1100	Lunch
1130	Stand-by for labs (unable to accept samples). work on tags for probes at C- farm and clean-up while standing by for labs
1430	Travel to office, paperwork, time cards
1530	End of shift.
	NA

OPERATOR/LICENSE: Olson/1217 *ES SUPPORT:* Repko *NCO:* Williams, Snook *HPT:* Bernard *FWS:* Lehmann/ Clark	**WEATHER:** 74 F, mostly cloudy. Winds from the southwest at 5-15 mph. **DOWNTIME:** .75 hr for RCTS stand-by for lab support - 3 hr	**DISCARDED ITEMS:** 1 - 2 5/8" recessed driver head

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson **TITLE:** *ES TECHNICAL PREPARER* **SIGNATURE:** Kelly Ol	**REVIEWED BY:** D.E. Skoglie **TITLE:** *ES TECHNICAL REVIEWER* **SIGNATURE:** David Skoglie **DATE:** 8/31/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7680.		DATE: 08-31-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 150
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
	SITE/EQUIPMENT INSPECTION: (Yes) No	(HHU CASE#1) HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26C34	43-45	100%
2. \	\	\
3. \	\	\
4. \	\	\

BOREHOLE SUMMARY

Borehole # C-7680 Tubing (2 5/8") @ 43' to 92' ft bgs; S.U. 2.3'

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ )@ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Develop And "Sell" Your Safety Solutions.
0630	Travel to 'C' farm
0700	Arrive at 'C' farm, stand-by for RCT for pre-job
0745	Pre-job
0800	inspect rig, post zone, Pull dummy tip, install sampler,
\	drive sample #B26C34, B26C35, B26CH5, Field blank-B26CW7, Trip
\	blank B26CV4 at 0910 from 43-45, pull and process sample,
\	recovery = 100% shoe + liners, re-install dummy tip, drive
\	2 5/8" casing from 45' to 84', survey out.
1130	Lunch
1200	Drive C-7680 to sample depth (92') clean-up
\	down-post zone
1230	Stand-by for weather conditions, (wind-rain),
	pick-up tags for probe locations while standing
	by at Rigging loft.
1430	Travel to office paperwork, time cards
1530	End of shift

NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Repko NCO: Snook, Williams HPT: Templeton, Barnard FWS: Lehmann/ Clark	WEATHER: 73 F, mostly cloudy. Winds from the southwest at 10-20 mph. DOWNTIME: .75 hr for RCT 2 hr for weather	DISCARDED ITEMS: 3 sample liners 6 sample caps 4 'O' rings

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly O	SIGNATURE: David E Skoglie DATE: 9-1-10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Continue sampling activities at #C7680.		DATE: 09-01-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 151
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0

SAMPLING SUMMARY

Sample #'s	Interval	%
1. B26C36	92-94	100%
2. B26C38	116'-118'	100%
3. B26C40	142-144	90%
4. /	/	/

SITE/EQUIPMENT INSPECTION (Yes) No

HHU (CASE#1) HHU CAT #2 HHUXL#3

BOREHOLE SUMMARY

Borehole # C-7680 Tubing (2 5/8") @ 92' to 144' ft bgs: S.U. 2.3'

Borehole # \ Tubing (\ ) @ \ to \ ft bgs: S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs: S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Cold Medication & Drowsiness.
0645	Travel to 'C' farm
0715	Arrive at 'C' Farm, stand-by for RCTS, pre-job
0800	Pre-job
0815	Inspect rig, post zone, pull dummy tip, install sampler,
\	drive sample #B26C36, B26C37, B26CH6, Field blank B26CW9,
\	B26CV5 - trip blank at 0940 from 92' to 94', pulled and processed
\	sample, recovery = 100% shoe and liners, install dummy tip
\	drive 2 5/8" casing to 116' (next sample depth) survey out.
1200	Lunch
1230	Back-pull inner rod, clean up
1315	stand-by for sampler to run in hole
1400	install sampler to depth
1445	stand by for swing shift pre-job
1630	Pre-job
1645	Return to site, post zone, drive sample #B26C38, B26C39, B26CH7, Trip blank B26CV6,
\	Field blank B26CW9 at 1700 from 116'-118', Pulled sampler, processed sample,
\	recovery = 100% in shoe and liners, install dummy tip drive 2 5/8" casing
\	to 142' bgs, pull dummy tip, install sampler drive sample #B26C40, B26C41,
\	B26CH8 and Field blank B26CX0 at 2022 from 142-144', pulled and processed
\	sample, recovery = 80% shoe, A-liner 100%, B-liner 95%, C-liner 100%
\	Cleaned pipe and down-posted site
2230	Travel to office, paperwork, time card
2330	End of shift

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Repko NCO: Williams, Snook, Skop, Rivera HPT: Bernard, Templeton, Cox FWS: Lehmann/Clark, Craft	WEATHER: 79 F, mostly cloudy, chance of rain. Winds from the west at 10-20 mph, with higher gusts. DOWNTIME: .75 hr for sampler 1.75 hr for shift change pre-job .75 hr for RCT	DISCARDED ITEMS: 9 sample liners 18 sample caps 6 Lynch pins 6 O' rings

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson	REVIEWED BY: D.E. Skoglie
TITLE: ES TECHNICAL PREPARER	TITLE: ES TECHNICAL REVIEWER
SIGNATURE: Kelly Olson	SIGNATURE: David E Skoglie DATE: 9/2/10

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DRILLING AND SAMPLING (PERCUSSION) DAILY WORK RECORD

PURPOSE: Decommission #C7680 and demobilize.		DATE: 09-02-10
LOCATION: "C" Tank Farm, 200 East Area, Hanford	EXCAVATION: DAN-3876 U-DIG #: 9256038	REPORT #: 152
START CARD NO. SE05741	DECOMMISSION NO. AE07483	RWP: CO-541, Rev. 11 AHA-09-008, Rev. 0
SAMPLING SUMMARY	SITE/EQUIPMENT INSPECTION: Yes No	HHU CASE#1 HHU CAT #2 HHUXL#3

SAMPLING SUMMARY

Sample #'s	Interval	%
1.	NA	
2.		
3.		
4.		

BOREHOLE SUMMARY

Borehole # C-7680 Tubing (2 5/8") @ 144' to 0' ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

Borehole # \ Tubing (\ ) @ \ to \ ft bgs; S.U. \

GEOPHYSICAL LOGGING

Boring #	Interval	Type
1.	NA	
2.		
3.		

TIME	WORK SUMMARY
0600	Safety meeting at office. Topic: Look Out For Your Co-Workers.
0630	Travel to 'C' farm
0700	arrive at 'C' farm, stand-by for RCTs
0800	Pre-job
0815	Inspect rig, post zone, back-pull C-7680 from 144' to 0' back fill with bentonite to surface, install surface protection at C-7679, clean-post zone.
1200	Lunch
1230	Finish topping off C-7680 with bentonite, clean-up site, move HHU #1 near horse trailer at 'C' farm, moved lights and misters to energy N.W.
1430	Travel to office, paperwork and time cards
1530	End of shift

NA

OPERATOR/LICENSE: Olson/1217 ES SUPPORT: Repko NCO: Williams, Swook HPT: Barnard, Cox FWS: Lehmann/ Clark	WEATHER: 85 F, mostly sunny. Winds from the northeast at 5-10 mph. DOWNTIME: 1 hr for RCTs	DISCARDED ITEMS: 7 sacks bentonite (granular) 2 sacks bentonite chips 1 - surface protection 1 - sack quick-crete

REFERENCE/CONTRACT INFORMATION: TFC-WO-09-1264; FSWO-DOW-030; RPP-PLAN-39114; FSWO-QAP-001

REPORT BY: Kelly Olson TITLE: ES TECHNICAL PREPARER SIGNATURE: Kelly Olson	REVIEWED BY: D.E. Skoglie TITLE: ES TECHNICAL REVIEWER SIGNATURE: David E. Skoglie DATE: 9/3/10

10/06/09 Rev 1

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APPENDIX D

SMALL DIAMETER GEOPHYSICAL LOGGING OF FOUR ADDITIONAL PROBEHOLES FOR 241-C TANK FARM CHARACTERIZATION, PHASE 2

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SMALL DIAMETER GEOPHYSICAL LOGGING OF FOUR ADDITIONAL PROBEHOLES FOR 241-C TANK FARM CHARACTERIZATION PHASE 2

by

Russel Randall, PhD and Randall Price

to

EnergySolutions Federal Services, Inc.
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Richland, Washington 99354

August 2010

Pacific Northwest Geophysics
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Three Rivers Scientific
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TERMS

BGO	Bismuth Germinate Oxide
KUT	potassium, uranium and thorium
PNG	Pacific Northwest Geophysics

SMALL DIAMETER GEOPHYSICAL LOGGING OF FOUR ADDITIONAL PROBEHOLES FOR 241-C TANK FARM CHARACTERIZATION PHASE 2

1.0 PROBEHOLE SURVEYS

Pacific Northwest Geophysics (PNG) and Three Rivers Scientific provided small diameter logging in probeholes installed at four additional sites of the Phase 2 Characterization within the 241-C Tank Farm.

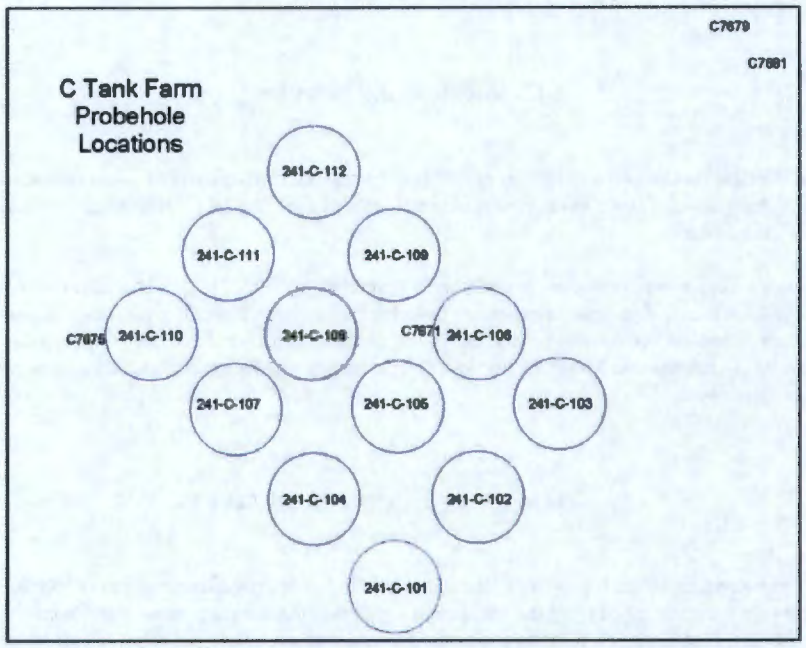
Logging surveys were conducted in each small diameter probehole with a Bismuth Germinate Oxide (BGO) spectral gamma scintillation detector and a neutron-neutron moisture probe. Detector calibration certificates for the BGO and neutron-moisture detectors are presented in Section 2.0, "Gamma and Moisture Surveys." The survey results are presented in Appendix A for each probehole.

2.0 GAMMA AND MOISTURE SURVEYS

The gamma and moisture logs were collected according to approved procedures (PNG 2009). The surveys were recorded from the maximum depth that the logging probe could achieve to the ground surface. Zero depth reference is at the ground surface. The maximum log depth in two probeholes (C7671 and C7679) was less than the bottom of the probehole, due to joint failure within the drive tubing string. A repeat measurement was acquired daily in at least one probehole to verify instrument repeatability. The main log and repeat intervals, as applicable, are presented on the same plot. The computed results of the main and repeat intervals were reviewed and for all of the intervals collected, the results agree within the uncertainty of the measurement counting statistics.

The survey results for each probehole are presented as a depth-versus-concentration plot in Appendix A. Appendix A also contains a table summarizing data for each probehole: probehole depth, maximum concentration of Cs-137 in pCi/g, and maximum detected depth of Cs-137. Figure 1 shows a map of the probehole locations relative to the underground storage tanks within the investigation site. Two probeholes (C7679 and C7681) were located outside the perimeter fence of the 241-C Tank Farm, northeast of the underground tanks.

Figure 1. Location of Additional Probeholes in 241-C Tank Farm Phase 2 Characterization.



2.1 GAMMA CALIBRATION AND SURVEYS

The spectral gamma scintillation detector uses a BGO crystal that is 2.54 cm (1 in.) diameter by 10.1 cm (4 in.) long. Other components of the gamma logging probe are the high-voltage supply, photo-multiplier tube, pre-amp, and multi-channel analyzer. The settings of the detector components are fixed (i.e., set up during assembly, prior to calibration) and cannot be adjusted by the field-logging engineer. The detector gain and lower threshold are set to record gamma ray activity with energies between 300 and 3000 keV. Lantern mantles containing Th-232 are used as a field verifier at the beginning and ending of each day's logging activities to check the detector resolution (integrity) and energy calibration (amplifier gain).

The spectral gamma surveys were logged at 100 seconds per 0.15 m (0.5 ft). A spectrum of 256 channels was collected each 0.15 m (0.5 ft) from the bottom of the probehole to the surface. The spectra were recorded with one spectrum per file in Ortec[1] PHA format. Spectra were processed to quantify the concentration of the naturally occurring radionuclides (K, U, & Th) and quantify Cs-137 when present above the minimum detection threshold. The minimum detection

[1]Ortec is a registered trademark of EG&G Ortec, Gouda, Netherlands.

level for Cs-137 is 1 pCi/g. The calibration certificate is shown in Figure 2. Also the gross gamma was calibrated to the industry standard of equivalent radium-226 (Eq.Ra) in pCi/g. Calibration was performed under the same conditions as at the investigation site.

2.2 NEUTRON MOISTURE CALIBRATION AND SURVEYS

The neutron moisture sonde combines the PNG-owned thermal-neutron detector and a DOE-owned sealed neutron source (50 millicuries americium and beryllium). The DOE-owned neutron source was used because it was already on the Hanford Site and is managed by the DOE Radiation Management Program. The neutron source is an integral component of a neutron moisture detector, manufactured by Campbell Pacific Nuclear, and is identified by the tool serial number H370608792.

The integrity of the sealed neutron source is always maintained when used in calibration and probehole logging activities. Source integrity is maintained by inserting the PNG-owned neutron detector module into the housing containing the sealed neutron source.

Calibration was performed in six borehole calibration models (Meisner and Randall 1995). Three of these models had a 15.24 cm (6-in.) hole size and three models had a 20.32 cm (8-in.) hole size. The moisture content was different for each borehole model within each set of three models (5, 12, and 20 percent by volume). The detector count rate in each of the six borehole calibration models is summarized in Table 1. The calibration certificate is shown in Figure 3.

Table 1. Moisture Calibration Data.

Moisture Content Percent—volume fraction (vf)	6-inch Models[a] (counts per second)	8-inch Models[a] (counts per second)
5% vf	103.87	81.1
12% vf	155.11	114.92
20% vf	191.9	140.17

[a]Count rates are the mean of 10 sample measurements at 60-sec each, 2/25/2009.

The probehole size for this project was 6.35 cm (2.5 in.) outside diameter. Therefore, the moisture calibration was extrapolated to the correct hole size. Figure 4 shows the moisture calibration extrapolation for the 6.35 cm (2.5-in.) hole size.

The probehole moisture survey was collected at 0.30 m/min (1 ft/min). Processing of the survey data requires that the detector raw survey data be normalized to the thickness of the steel casing present in the calibration models (0.826 cm [0.325 in.]) Given that the probehole casing thickness is 0.97 cm (0.38 in.), a correction factor of 1.055 is required to increase (normalize) the observed neutron detector count rate to the conditions of the calibration model (Meisner et al. 1996).

Figure 2. BGO Calibration Certificate.

Certificate of Calibration
SDGR.BGO.2

April 21, 2009

Data were taken at the Hanford KUT models on April 21, 2009. SDGR.BGO.2 is the designated Scintillator tool. Four models were used for Spectral KUT calibration. Ten spectra were recorded in order to perform statistical analysis. The observed statistical deviations were seen to be within the theoretically predicted variation, refer to the files compressed: AveOut2.XLS for this analysis. The instrument was covered with 0.94 cm (0.37-in.) wall thickness probe tubing.

The algorithm described in WHC-SD-EN-TI-293, *Procedures for Calibrating Scintillation Gamma-Ray Well Logging Tools Using Hanford Formation Models*, Rev. 0, determines the coefficient analysis. Three energy windows are used for each potassium, uranium and thorium (K U & T), and these are:

K: 1320-1575 keV **U: 1650-2390 keV** **T: 2475-2765 keV**

The concentration for each of the three elements is a linear combination of the count rates in the three windows. The resulting coefficients for each of the three elements are:

Concentration-K =	**4.712*K**	**-4.297*U**	**4.057*T**
Concentration-U =	**0.0*K**	**1.431*U**	**-2.998*T**
Concentration-T =	**0.0*K**	**-0.052*U**	**2.032*T**

Where K, U & T are the count rates (c/s) in the listed energy windows and the resulting concentration values are in pCi/g.

Digital files condensed as Cal_SD-GR-2_2009-v0.zip. This compressed file contains:

- Calibration raw data
- MathCad data analysis files
- Spreadsheet data formatting

The undersigned certifies that the data archived in the file "Cal_SD-GR-2_2009-v0.zip" were collected and evaluated in accordance with WHC-SD-EN-TI-293 and that the above-stated calibration coefficients are correct and applicable for the tool SDGR.BGO.2 effective April 21, 2009.

Signature:

/s/ Russel Randall, PhD April 23, 2009
Three Rivers Scientific

Figure 3. Moisture Calibration Certificate, 15.24 cm (6-in.) and 20.32 cm (8-in.) Hole.

Certificate of Calibration for
Instrument SD-Moist792

February 25, 2009

Data were taken in the Moisture models on February 25, 2009, for SD-Moist792 neutron-neutron moisture tool. The neutron source from DOE moisture tool # H370608792 was used with the passive neutron detector probe from PNG.

Six models were used for moisture calibration, three for 15.24 cm (6-in.) casing and three for 20.32 cm (8-in.) casing. Repeated spectra were recorded for each model in order to perform statistical analysis. The observed statistical variation agreed with the theoretically predicted variation. Refer to the file MoistCal.xls for this analysis.

The coefficient generation is determined by the algorithm described in WHC-SD-EN-TI-306, *Radionuclide Logging System In Situ Vadose Zone Moisture Measurement Calibration*, Rev. 0. The regression function used is a power law form and defined by:

$$V = a \cdot CR^{\alpha}$$

Where V is the formation moisture content in volume fraction water in vf units. One vf unit is 1% by volume water. The coefficients a and α are fit coefficients, and CR is the deadtime corrected observed total count rate, (c/s).

6-in. casing	**8-in. casing**
a = .0001586	**a = .00008287**
α = 2.229	**α = 2.504**

The undersigned certifies that the data archived in data file "SD-Moist792_2009.zip" were collected and evaluated in accordance with WHC-SD-EN-TI-306 and that the above-stated calibration coefficients are correct and applicable for tool SD-Moist792, effective February 25, 2009.

Signature:

/s/ Russel Randall, PhD — February 28, 2009
Three Rivers Scientific

Figure 4. Moisture Calibration Certificate, 6.35 cm (2.5-in.) Hole.

Moisture Calibration Extrapolation to 2.5 Inch Borehole
Instrument SD-Moist792

February 25, 2009

Moisture calibration was performed in the Hanford physical models. These standards have 15.24 cm and 20.32 cm (6-in. and 8–in.) inside diameter casings. The Tank Farm Direct Push borehole is cased with a 5.08 cm (2.5-in.) outside diameter iron casing. The calibration for the moisture response is a function of borehole diameter.

The coefficient generation is determined by the algorithm described in WHC-SD-EN-TI-306, *Radionuclide Logging System In Situ Vadose Zone Moisture Measurement Calibration*, Rev. 0. The regression function used is a power law form and defined by:

$$V = a \cdot CR^{\alpha}$$

Where V is the formation moisture content in volume fraction water in vf units. One vf unit is 1% by volume water. The coefficients a and α are fit coefficients, and CR is the deadtime corrected observed total count rate, (c/s). A linear extrapolation was applied to determine the 5.08 cm (2.5-in.) borehole diameter.

2.51-in. borehole
a = .0002123
α = 2.010

The undersigned certifies that the analysis files are archived in the file "SD-Moist792_2009.zip" and were evaluated in accordance with Energy*Solutions* procedures and that the above-stated calibration coefficients are correct and applicable for tool SD-Moist792, effective February 25, 2009.

Signature:

/s/ Russel Randall, PhD — February 28, 2009
Three Rivers Scientific

6

3.0 REFERENCES

Meisner, James and Russel Randall, 1995, *Vadose Zone Moisture Measurement Through Steel Casing Evaluation*, WHC-SD-EN-TI-304, Rev.0, Westinghouse Hanford Company, Richland, Washington.

Meisner, James, Randall Price, and Russel Randall, 1996, *Radionuclide Logging System In Situ Vadose Zone Moisture Measurement Calibration*, WHC-SD-EN-TI-306, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

PNG, 2009, *Procedures: Calibration, Logging, Quality Assurance and Data Management*, Pacific Northwest Geophysics, Kennewick, Washington.

Randall, R. and D. Stromswold, 1995, *Procedures for Calibrating Scintillation Gamma-Ray Well Logging Tools Using Hanford Formation Models*, WHC-SD-EN-TI-293, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

APPENDIX A
SPECTRAL GAMMA AND MOISTURE SURVEY RESULTS

Survey plots follow for the four additional probeholes installed for the C Tank Farm Characterization Phase 2. Each probehole was surveyed with both the BGO spectral gamma and moisture probes. Each log plot is preceded by a header information page that shows the repeat/overlap intervals, isotopes analyzed, observations, and logging probe calibration dates. The log plots show a maximum of 100 feet per page with a 10 ft overlap between page breaks.

The spectral gamma survey data were processed to quantify the naturally occurring radionuclides (K, U, & Th), and the man-made radionuclide of Cs-137 (blue solid line). The spectra were processed both as individual spectra for each survey depth and as a moving sum of three spectra (i.e., sum of the individual survey depth and the two adjacent spectra, above and below the current depth position). Both results are presented on the results plot. The results for the 3-spectra sum are plotted as a wide line. Also the gross gamma was calibrated to the industry standard of equivalent radium-226 (Eq.Ra) in a scale of 2 to 5 pCi/g (brown line).

The neutron-neutron moisture survey data are shown with a blue dotted line. The moisture plot scale is 0-30 (% vf).

Table A1 contains a summary of the survey results for each probehole: maximum log depth, maximum detection level for Cs-137, maximum depth of Cs-137 detection, and special observations by the analyst to flag the detection of other isotopes in addition to the natural radionuclides and Cs-137.

Table A1. Probehole Survey Summary.

Probehole Identification	Hole Depth (meters)	Hole Depth (feet)	Cs-137 (pCi/g) Max Detection	Cs-137 Max Detected Depth	Flag Isotopes Other Than Naturals and Cs-137
C7671	39.9	131	218 pCi/g at surface	2 ft	None
C7675	67.7	222	9 pCi/g at surface	1 ft	None
C7679	54.3	178	None	None	None
C7681	67.1	220	None	None	None

C-FARM C7671 HEADER INFORMATION

Small Diameter – Spectral Gamma & Moisture Survey

Probehole:	C7671	Log Date:	Jun 2010
Project:	C Farm	Depth Ref:	Ground Surface

Repeat/Overlap Intervals

Spectral:	132-121	Moisture:	20-14
	44-43		
	54-49		

Isotopes Analyzed

Elements:	Energies Used (keV)
K-40	1462
Natural Uranium	1650-2390
Natural Thorium	2614
Cs-137	661

Observations

Spectral:

Cs-137 was observed at the surface, with a maximum reading of 218 pCi/g. Cs-137 does not show a response in the Eq-Ra226 because the energy threshold used 1000keV, which is above the Cs-137 gamma emitted.

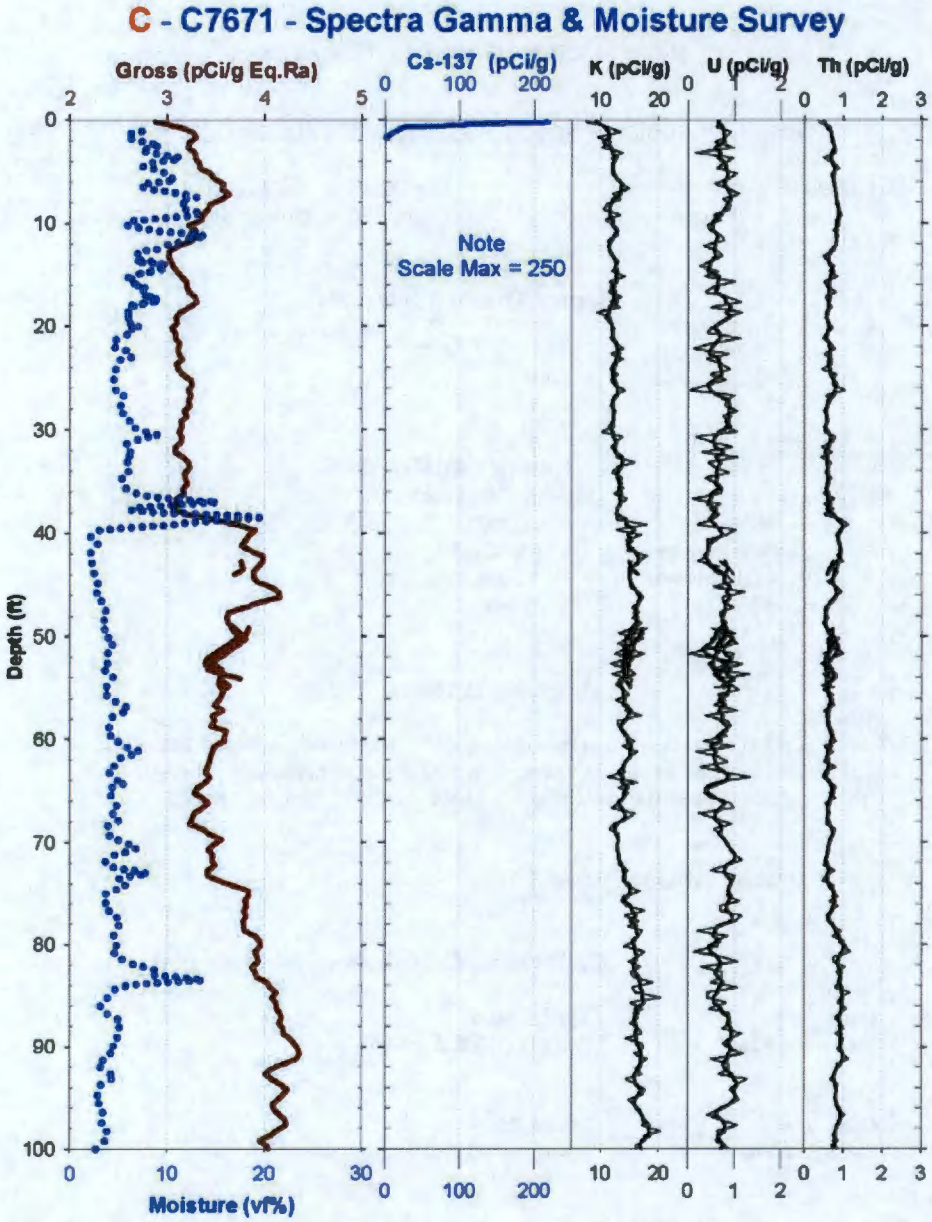
Moisture:

Moisture values range from 2-20%.

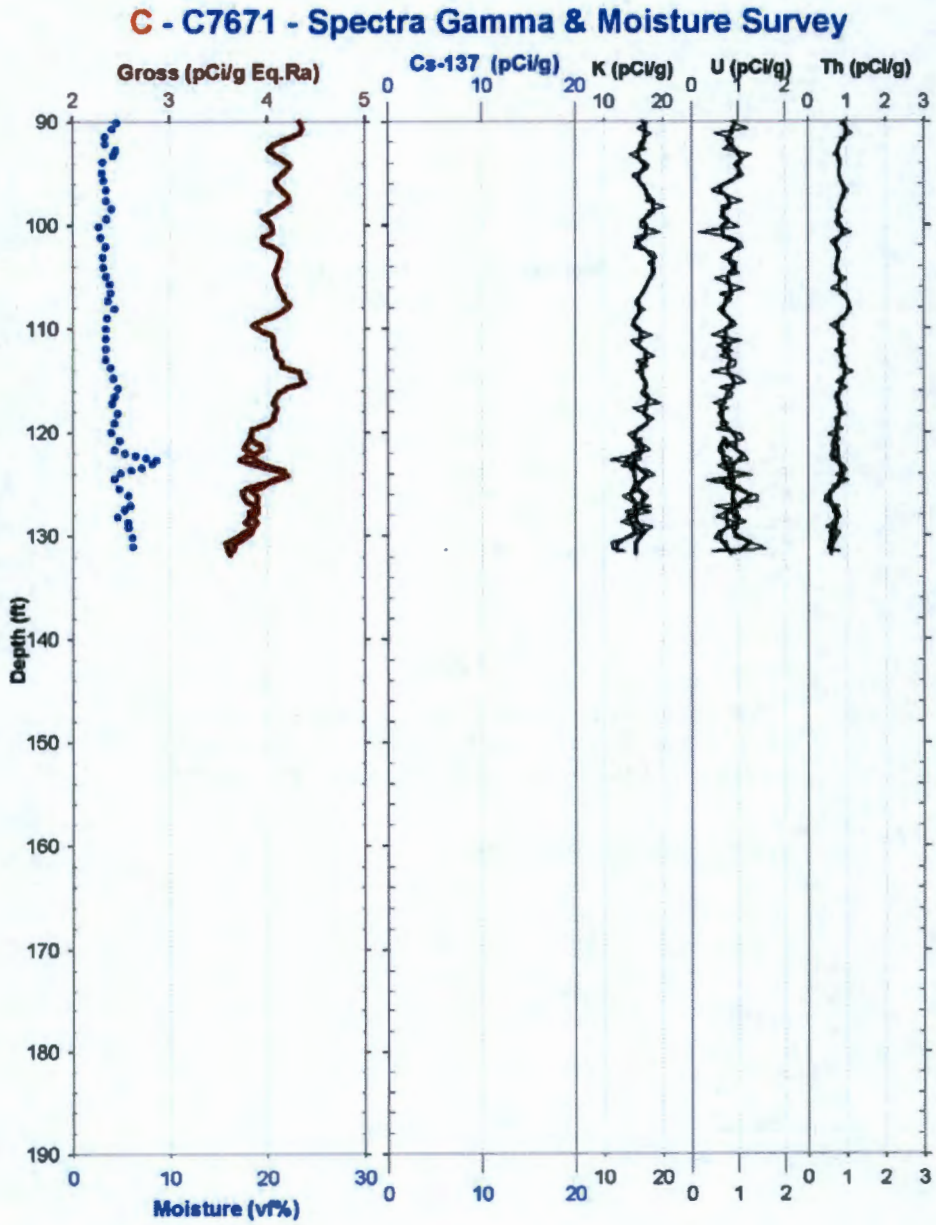
Calibration Certificates

Spectral	
Date:	Apr 21, 2009
Electronic File:	Cal_SD-GR-2_2009-v0.zip
Moisture	
Date:	Feb 25, 2009
Electronic File:	SD-Moist792_2009.zip

A-2


C - C7671 - Spectra Gamma & Moisture Survey
Gross (pCi/g Eq.Ra)
Cs-137 (pCi/g)
K (pCi/g)
U (pCi/g)
Th (pCi/g)
Depth (ft)
Moisture (vf%)
Note
Scale Max = 250

A-3


C - C7671 - Spectra Gamma & Moisture Survey
Gross (pCi/g Eq.Ra)
Cs-137 (pCi/g)
K (pCi/g)
U (pCi/g)
Th (pCi/g)
Depth (ft)
Moisture (vf%)

A-4

C-FARM C7675 HEADER INFORMATION

Small Diameter – Spectral Gamma & Moisture Survey

Probehole:	C7675	Log Date:	Jun 2010
Project:	C Farm	Depth Ref:	Ground Surface

Repeat/Overlap Intervals

Spectral:	37-32	Moisture:	35-30
	35-24		
	13-5		

Isotopes Analyzed

Elements:	Energies Used (keV)
K-40	1462
Natural Uranium	1650-2390
Natural Thorium	2614
Cs-137	661

Observations

Spectral:

Cs-137 was observed at the surface, with a maximum reading of 8.6 pCi/g. Cs-137 does not show a response in the Eq-Ra226 because the energy threshold used 1000keV, which is above the Cs-137 gamma emitted.

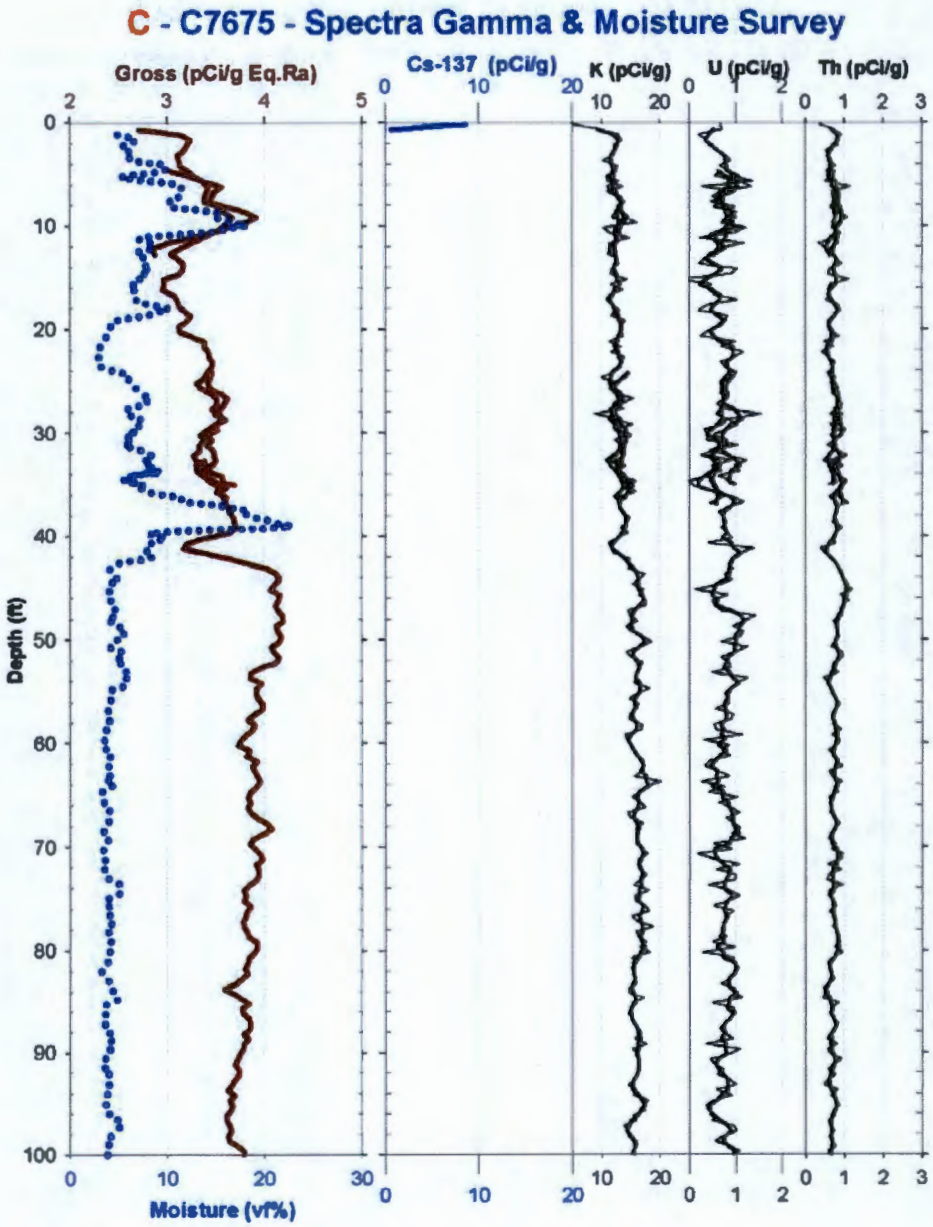
Moisture:

Moisture values range from 3-23%.

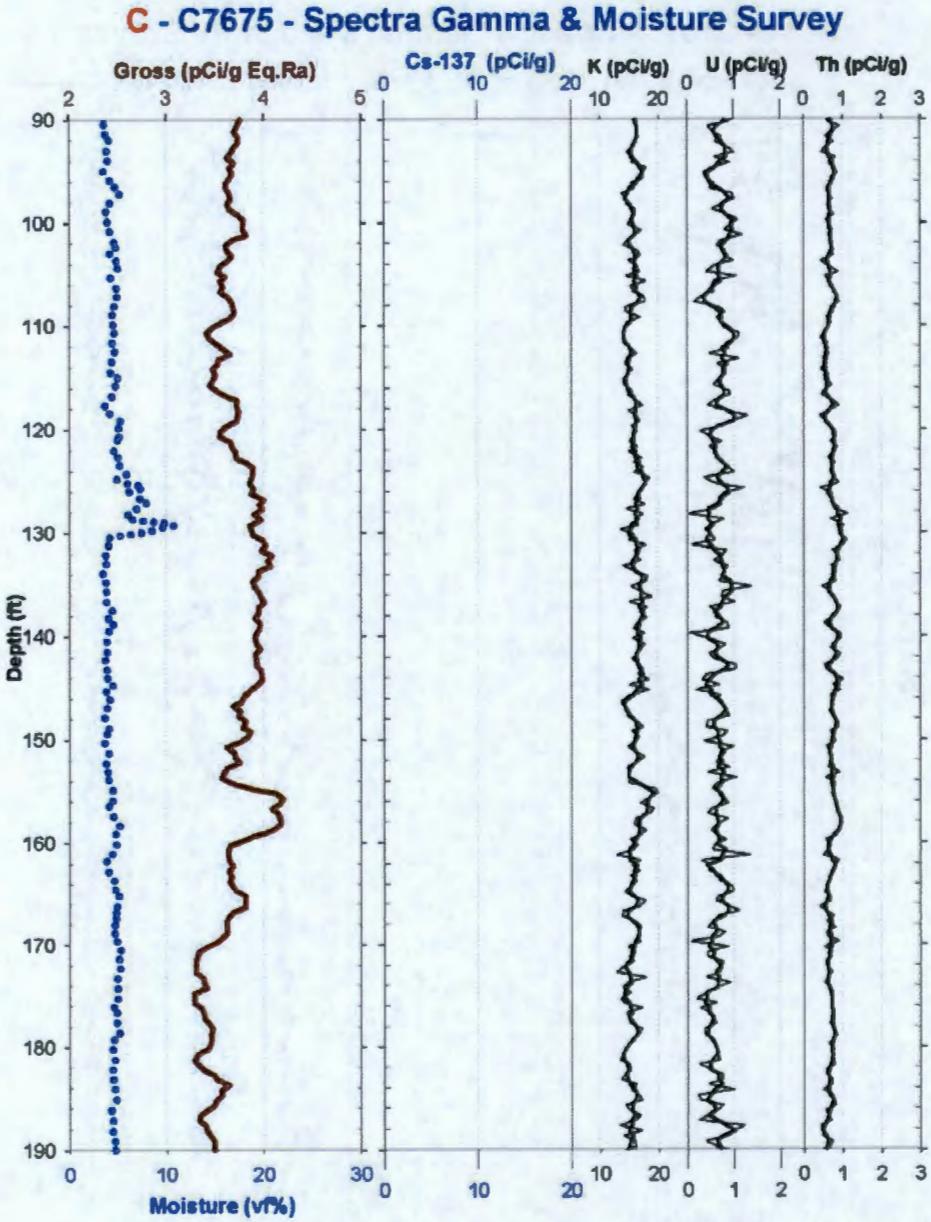
Calibration Certificates

Spectral	
Date:	Apr 21, 2009
Electronic File:	Cal_SD-GR-2_2009-v0.zip
Moisture	
Date:	Feb 25, 2009
Electronic File:	SD-Moist792_2009.zip

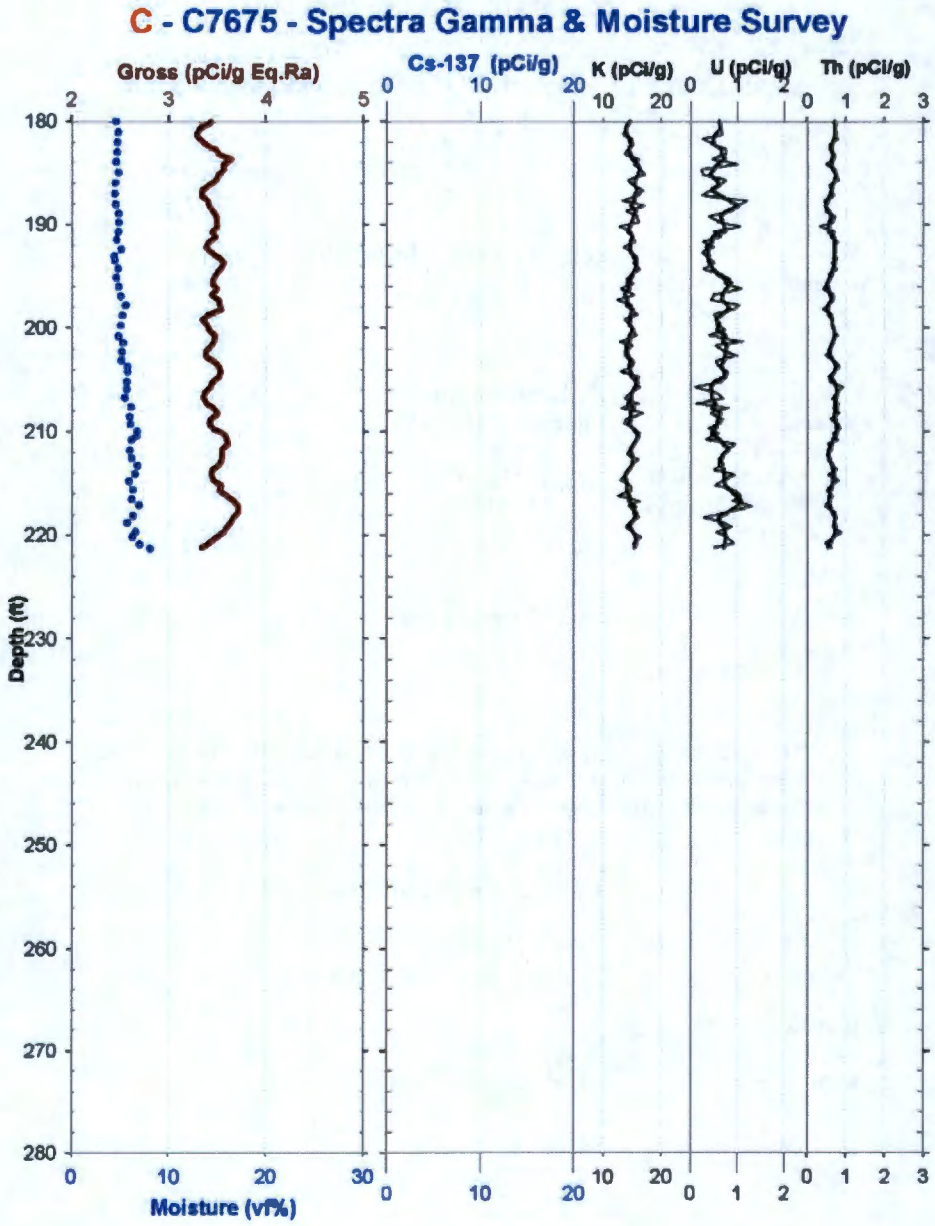
A-5


C - C7675 - Spectra Gamma & Moisture Survey
Gross (pCi/g Eq.Ra)
Cs-137 (pCi/g)
K (pCi/g)
U (pCi/g)
Th (pCi/g)
Depth (ft)
Moisture (vf%)

A-6


C - C7675 - Spectra Gamma & Moisture Survey
Gross (pCi/g Eq.Ra)
Cs-137 (pCi/g)
K (pCi/g)
U (pCi/g)
Th (pCi/g)
Depth (ft)
Moisture (vf%)

A-7


C - C7675 - Spectra Gamma & Moisture Survey
Gross (pCi/g Eq.Ra)
Cs-137 (pCi/g)
K (pCi/g)
U (pCi/g)
Th (pCi/g)
Depth (ft)
Moisture (vf%)

A-8

C-FARM C7679 HEADER INFORMATION

Small Diameter – Spectral Gamma & Moisture Survey

Probehole:	C7679	Log Date:	Jul 2010
Project:	C Farm	Depth Ref:	Ground Surface

Repeat/Overlap Intervals

Spectral:	135-131	Moisture:	70-64
	35-29		

Isotopes Analyzed

Elements:	Energies Used (keV)
K-40	1462
Natural Uranium	1650-2390
Natural Thorium	2614
Cs-137	661

Observations

Spectral:

Cs-137 was not observed.

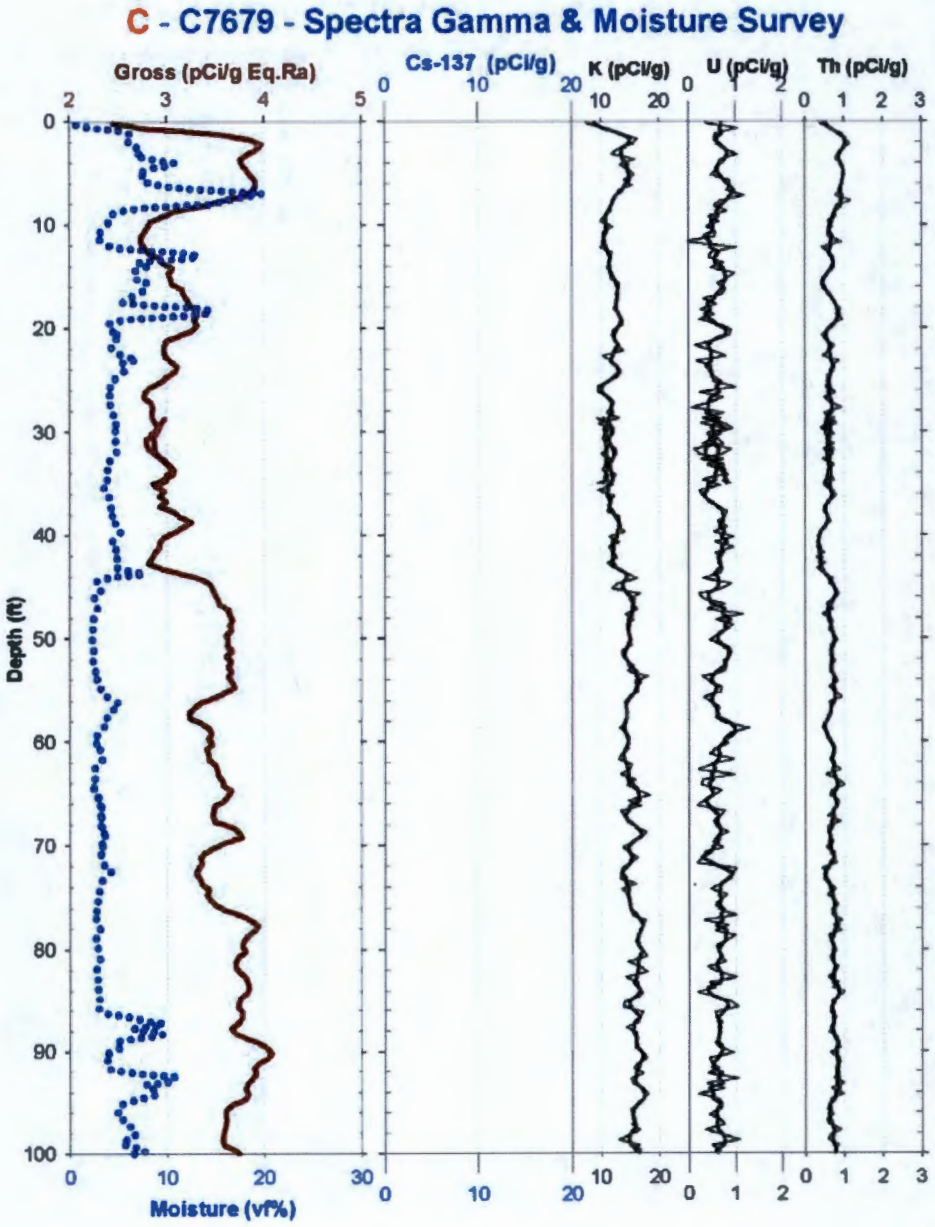
Moisture:

Moisture values range from 2-26%. The thin higher moisture lens at 115ft corresponds to a slight increase in K, and higher increases in both U and Th. Note that the gamma response is not as depth resolved as the moisture.

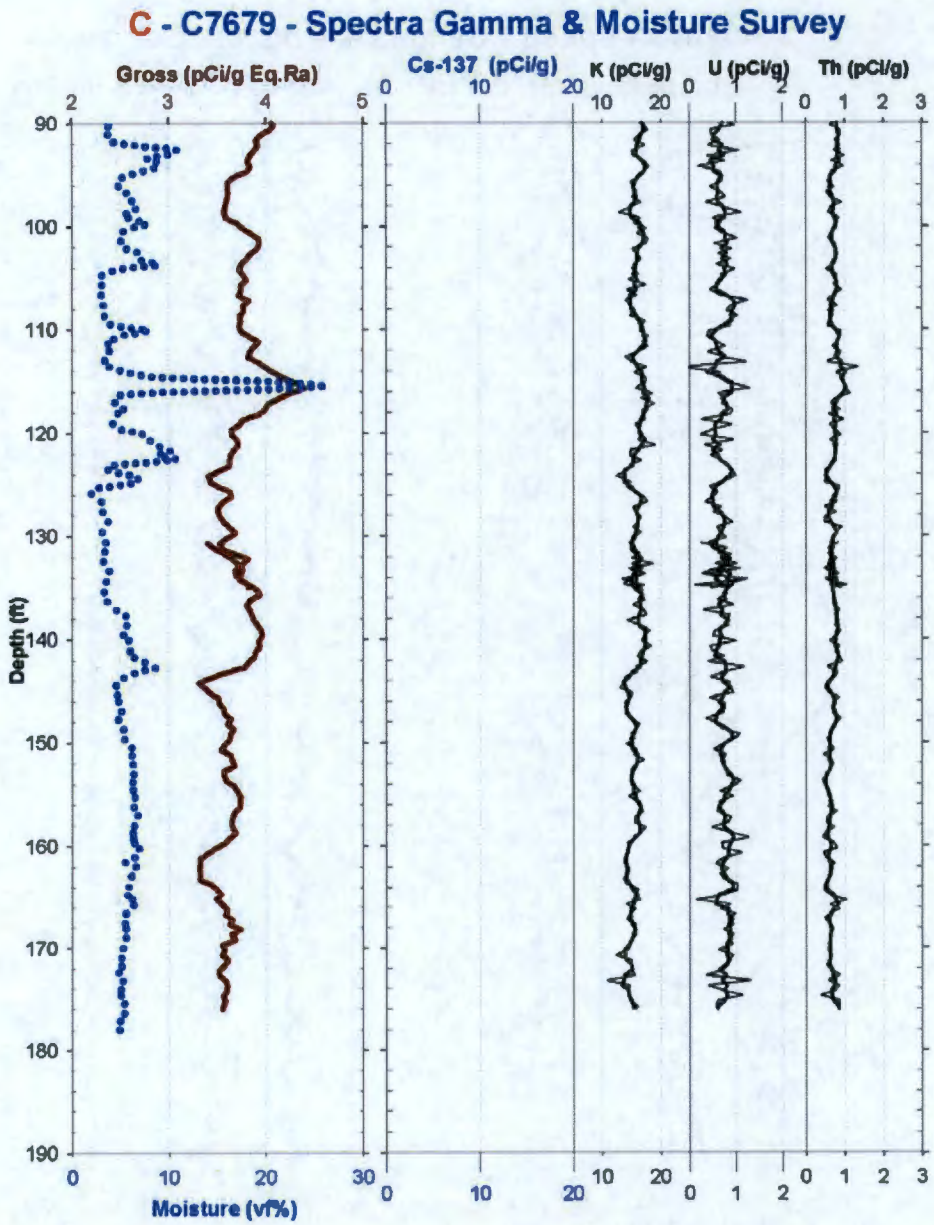
Calibration Certificates

Spectral	
Date:	Apr 21, 2009
Electronic File:	Cal_SD-GR-2_2009-v0.zip
Moisture	
Date:	Feb 25, 2009
Electronic File:	SD-Moist792_2009.zip

A-9


C - C7679 - Spectra Gamma & Moisture Survey
Gross (pCi/g Eq.Ra)
Cs-137 (pCi/g)
K (pCi/g)
U (pCi/g)
Th (pCi/g)
Depth (ft)
Moisture (vf%)

A-10


C - C7679 - Spectra Gamma & Moisture Survey
Gross (pCi/g Eq.Ra)
Cs-137 (pCi/g)
K (pCi/g)
U (pCi/g)
Th (pCi/g)
Depth (ft)
Moisture (vf%)

A-11

C-FARM C7681 HEADER INFORMATION

Small Diameter – Spectral Gamma & Moisture Survey

Probehole:	C7681	Log Date:	Jun 2010
Project:	C Farm	Depth Ref:	Ground Surface

Repeat/Overlap Intervals

Spectral:	99-94	Moisture:	35-28
	33-25		22-15
	26-25		
	7-6		

Isotopes Analyzed

Elements:	Energies Used (keV)
K-40	1462
Natural Uranium	1650-2390
Natural Thorium	2614
Cs-137	661

Observations

Spectral:

Cs-137 was not observed.

Moisture:

Moisture values range from 2-24%.

Calibration Certificates

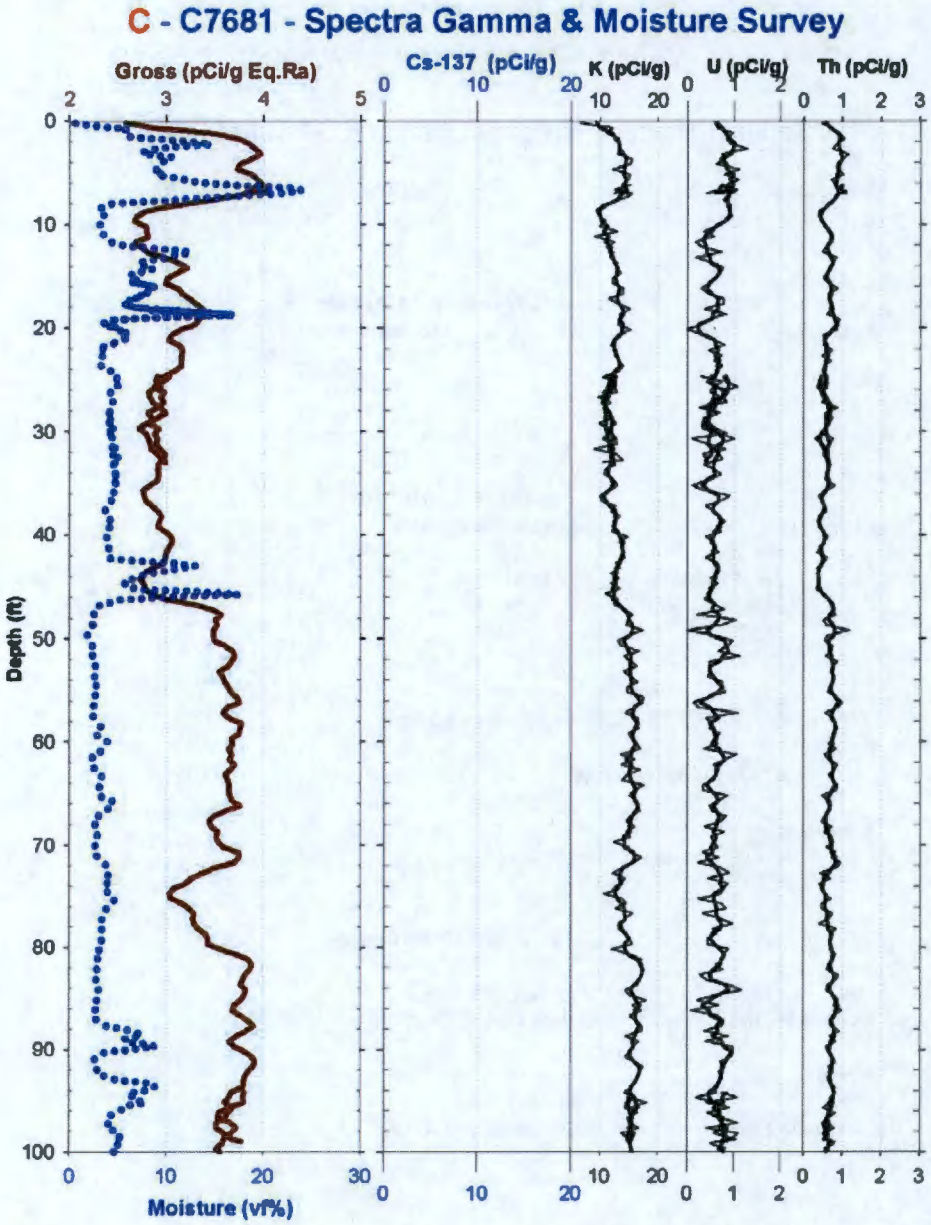
Spectral

Date:	Apr 21, 2009
Electronic File:	Cal_SD-GR-2_2009-v0.zip

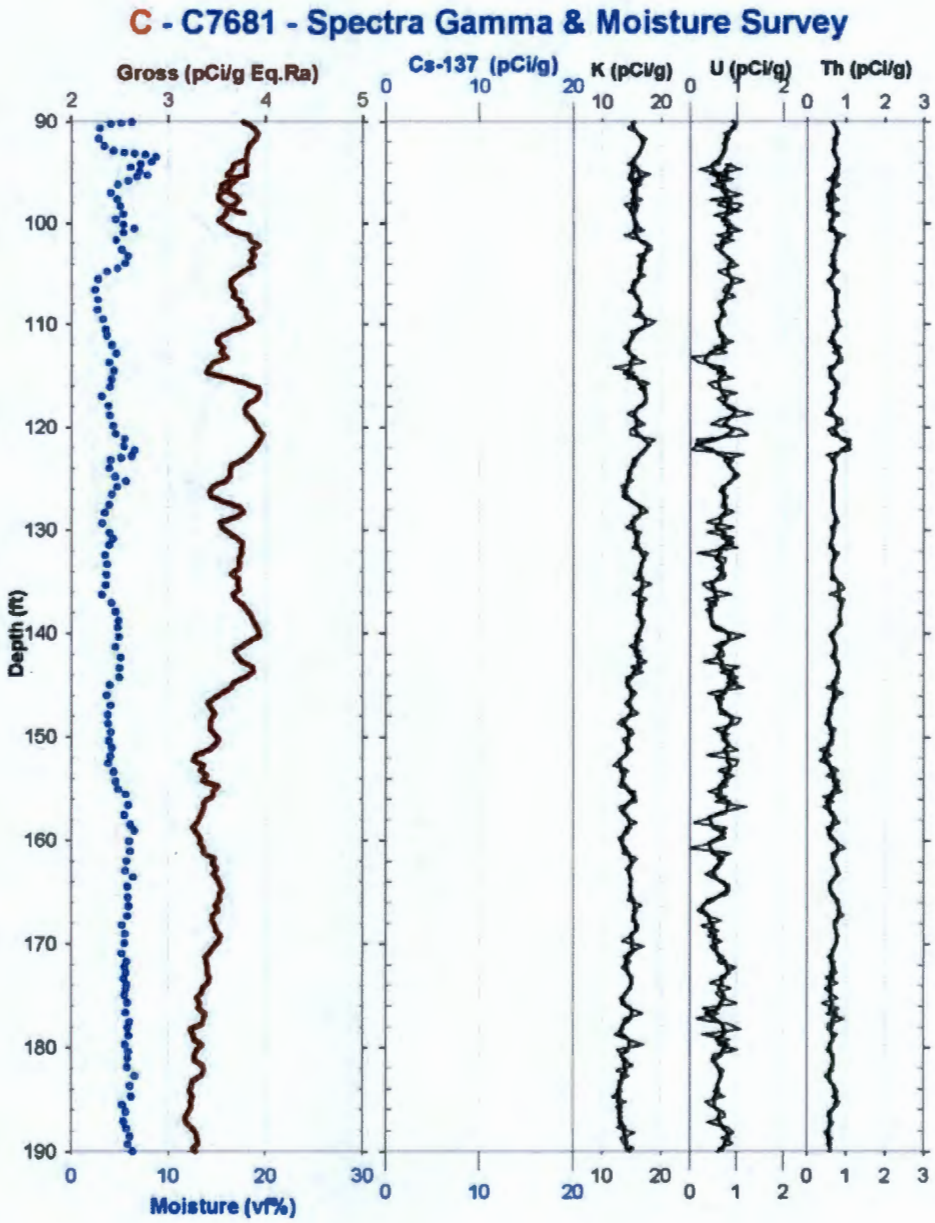
Moisture

Date:	Feb 25, 2009
Electronic File:	SD-Moist792_2009.zip

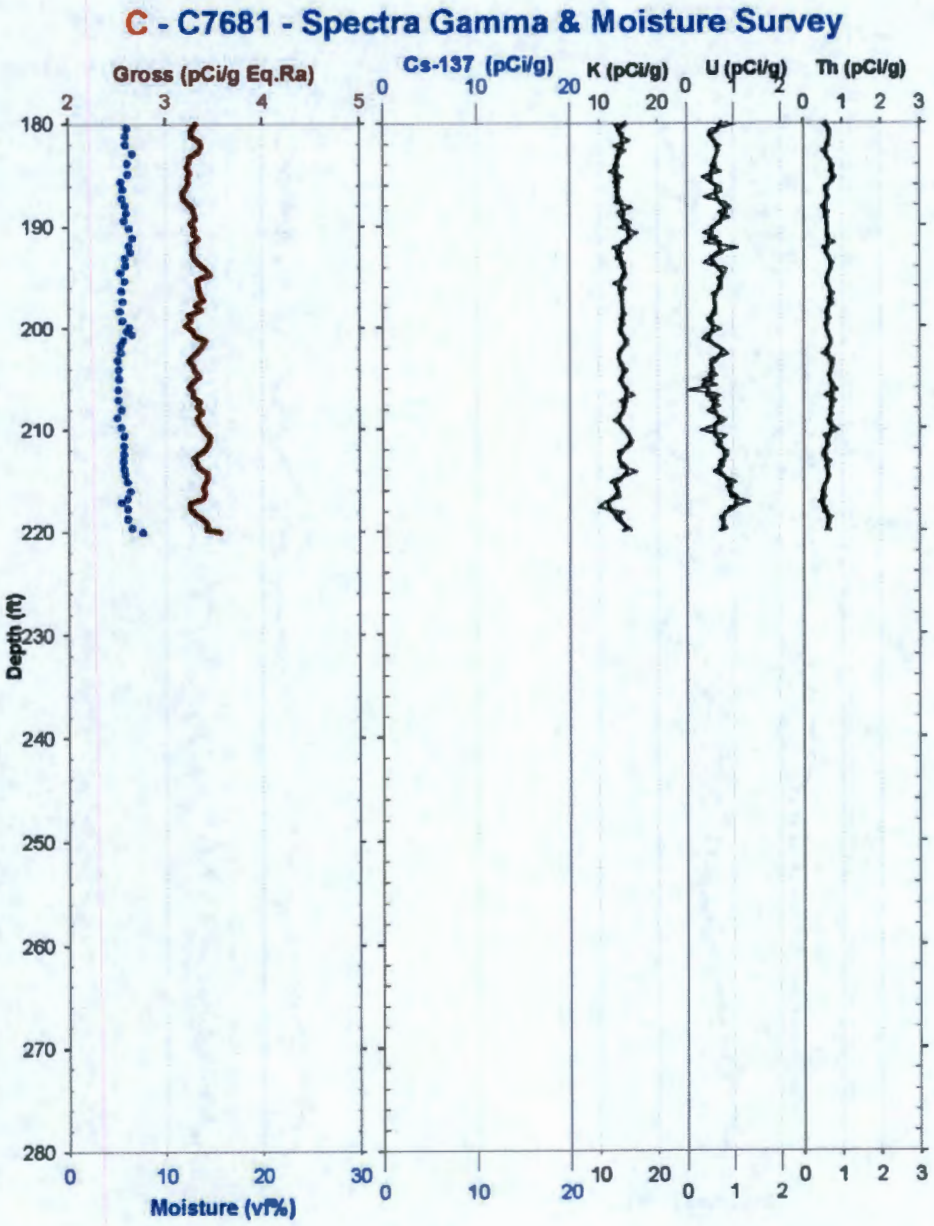
A-12


C - C7681 - Spectra Gamma & Moisture Survey
Gross (pCi/g Eq.Ra)
Cs-137 (pCi/g)
K (pCi/g)
U (pCi/g)
Th (pCi/g)
Depth (ft)
Moisture (vf%)

A-13


C - C7681 - Spectra Gamma & Moisture Survey
Gross (pCi/g Eq.Ra)
Cs-137 (pCi/g)
K (pCi/g)
U (pCi/g)
Th (pCi/g)
Depth (ft)
Moisture (vf%)

A-14


C - C7681 - Spectra Gamma & Moisture Survey
Gross (pCi/g Eq.Ra)
Cs-137 (pCi/g)
K (pCi/g)
U (pCi/g)
Th (pCi/g)
Depth (ft)
Moisture (vf%)

A-15

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APPENDIX E

CHAIN OF CUSTODY FORMS AND SAMPLE DOCUMENTS

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Washington River Protection Solutions
SAMPLING AUTHORIZATION FORM

SAF NUM V10-002 **SAF TITLE** WMA C Sampling for CMS - QC Sampling **REV** 1

PROJECT	WMA C		
PROGRAM/PROJECT TYPE	RCRA Closure CMS		
OPERABLE UNIT	TBD		
REQUESTER	SYDNOR, HA	**CHARGE CODES**	
TASK MANAGER	TEMPLETON, AM		
PROJECT COORDINATOR	BERLIN, PC		
ESTIMATED START DATE	12/1/2009	**SAMPLE AREA**	200 East
ESTIMATED COMPLETION DATE	1/1/2012	**MATRIX**	WATER
ESTIMATED NUMBER OF SAMPLES	10		

SAMPLING ORGANIZATIONS

Facility Samplers

LABORATORY/PRICE_CODE/PRIORITY TURNAROUND/REQUIRED TURNAROUND/DATA DELIVERABLE

Primary / 222-S Lab Operations / 7P / 75 Days / 75 Days / Summary

SAF COMMENT

222-S will transmit copies of all COCs to Andrew Templeton and Harold Sydnor.

** The applicable FSAP is RPP-PLAN-40564, Revision 2 and the applicable SAP is RPP-PLAN-38777, Revision 1.

All secondary analytes listed in RPP-Plan-38777 Tables 4-2 and 4-5 will be reported in the data package and electronically when the value is greater than the detection limit.

Quality Control parameters for constituents are listed in RPP-Plan-38777 Table 5-1.

Final data package should be a Format II with QA verification. Both Required and Priority Turnaround Time for 222S should be changed to 120 days.

Required detection limits for Radionuclide are listed in RPP-Plan-38777 Table 5-2.

Required detection limits for Non-Radionuclide are listed in RPP-Plan-38777 Table 5-3.

Target detection limits for Primary Radionuclides are listed in RPP-Plan-38777 Table 5-4.

Target detection limits for Primary Chemicals are listed in RPP-Plan-38777 Table 5-5.

SAF REVISION COMMENT

SAF revised per Andrew Templeton - CCN WMAC-003 - July 2010

COC COMMENT

Washington River Protection Solutions
SAMPLING AUTHORIZATION FORM

SAF NUM V10-002 **SAF TITLE** WMA C Sampling for CMS - QC Sampling **REV** 1

Field Sampling Requirements

Laboratory: 222-S Lab Operations **Matrix: WATER**

Parameter / Analysis	Reference Method	Container / Volume	VolReq	Preservation	Holding Times
pH (Water) - 9040 (TF)	9040_PH	G/P 500 mL	Full QC	Cool~4C	ASAP
IC Anions - 9056	9056_ANIONS_IC		Full QC		28 Days/48 Hours
VOA - 8260 (TCL) (TF)	8260_VOA_GCMS	aGs* 3X40 mL	Full QC	HCl or H2SO4 to pH <2/Cool~4C	14 Days
(m+p)-Xylene, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1-Butanol, 2-Butanone, 2-Nitropropane, 4-Methyl-2-pentanone, Acetone, Benzene, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroform, cis-1,2-Dichloroethylene, Diethyl ether, Ethyl acetate, Ethylbenzene, Isobutyl alcohol, Methanol, Methylene chloride, o-Xylene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Trichloromonofluoromethane, Vinyl chloride, Xylenes (total)					
Ethylene glycol - 8015B	8015_VOA_GC	Gs* 3X40 mL	Full QC	Cool~6C	14 Days
Semi-VOA - 8270 Complete (TF)	8270_SVOA_GCMS	aG 1000 mL	Full QC	Cool~4C	7/40 Days
1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, 2,4,5-Trichlorophenol, 2,4,6-Trichlorophenol, 2,4-Dinitrotoluene, 2,6-bis(1,1-dimethylethyl)-4-methyl phenol, 2-Chlorophenol, 2-Methylphenol (cresol, o-), 2-Nitrophenol, 3+4 Methylphenol (cresol, m+p), 4-Chloro-3-methylphenol, Acenaphthene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl) phthalate, Butylbenzylphthalate, Cellosolve Solvent, Chrysene, Cyclohexanone, Di-n-butylphthalate, Di-n-octylphthalate, Dibenz[a,h]anthracene, Fluoranthene, Hexachlorobutadiene, Hexachloroethane, Indeno(1,2,3-cd)pyrene, Isobutyl alcohol, n-Nitrosodi-n-dipropylamine, n-Nitrosomorpholine, Naphthalene, Nitrobenzene, Pentachlorophenol, Pyrene, Pyridine, Total cresols, Tributyl phosphate					
TPH-Diesel Range - WTPH-D	WTPH_DIESEL	aG 1000 mL	Full QC	Cool~6C	14/40 Days
TPH-Gasoline Range - WTPH-G	WTPH_GASOLINE	aGs* 3X40 mL	Full QC	HCl to pH <2/Cool~6C	14 Days
MBP/DBP - 9056 (modified)	DBP_IC	G/P 125 mL	Full QC	Cool~6C	14 Days
Pesticides - 8081 (TF)	8081_PEST_GC	aG 2X1000 mL	Full QC	Cool~6C	14/40 Days
PCBs - 8082	8082_PCB_GC	aG 3X1000 mL	Full QC	Cool~6C	None
ICP Metals - 6010 (SW-846) (TF)	6010_METALS_ICP	G/P 500 mL	Full QC	HNO3 to pH <2	6 months/28 days
Mercury - 7470 - (CV) (TF)	7470_HG_CVAA		Full QC		28 Days
RADISO_ICPMS (TF)	RADISOTOPES_ICPMS		Full QC		6 Months
300.7_AMMONIUM (TF)	300.7_CATIONS_IC	G/P 250 mL	Full QC	H2SO4 to pH <2/Cool~6C	28 Days
Sulfide - 9215	9215_SULFIDE	G/P 500 mL	Full QC	ZnAc+NaOH to pH > 9/Cool~6C	7 Days
Total Cyanide - 9014 (TF)	9014_CYANIDE	G/P 250 mL	Full QC	NaOH to pH >=12/Cool~4C	14 Days

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Washington River Protection Solutions
SAMPLING AUTHORIZATION FORM

SAF NUM V10-002 **SAF TITLE** WMA C Sampling for CMS - QC Sampling **REV** 1

Field Sampling Requirements

Laboratory: 222-S Lab Operations **Matrix: WATER**

Parameter / Analysis	Reference Method	Container / Volume	VolReq	Preservation	Holding Times
GAMMA ENERGY ANALYSIS (TF)	GAMMA_GS	G/P 2X1000 mL	Full QC	HNO3 to pH <2	6 Months
Americium-241 (TF)	AMCMISO_EIE_PLT_AEA		Full QC		6 Months
CURIUM	AMCMISO_EIE_PLT_AEA		Full QC		6 Months
Nickel-63 (TF)	NI63_LSC		Full QC		6 Months
Selenium-79 (TF)	SE79_SEP_IE_LSC		Full QC		6 Months
Strontium-89,90 -- Sr-90	SRISO_SEP_PRECIP_GPC		Full QC		6 Months
Isotopic Plutonium Plutonium-238, Plutonium-239/240	PUISO_PLATE_AEA		Full QC		6 Months
C-14	C14_LSC	G/P 1000 mL	Full QC	None	6 Months
H3 - TRITIUM	TRITIUM_DIST_LSC		Full QC		6 Months
I129_SEP_GEA (TF)	I129_SEP_GEA		Full QC		6 Months

Key to Container Types

G = Glass
Gs = Glass w/ septum cap
Gs* = Glass w/ septum cap- no head space in container
P = Plastic (Polyethylene)
aG = Amber Glass
aGs = Amber Glass w/ septum cap
aGs* = Amber Glass w/ septum cap- no head space in container
aG/T = Amber Glass w/ Teflon Lined Lid

Washington River Protection Solutions
SAMPLING AUTHORIZATION FORM

SAF NUM V10-003 **SAF TITLE** WMA C Sampling for CMS **REV** 3

PROJECT	WMA C		
PROGRAM/PROJECT TYPE	RCRA Closure CMS		
OPERABLE UNIT	NONE		
REQUESTER	TEMPLETON, AM	**CHARGE CODES**	
TASK MANAGER	SYDNOR, HA		
PROJECT COORDINATOR	BERLIN, PC		
ESTIMATED START DATE	12/1/2009	**SAMPLE AREA**	200 East
ESTIMATED COMPLETION DATE	1/1/2012	**MATRIX**	SOIL
ESTIMATED NUMBER OF SAMPLES	30		

SAMPLING ORGANIZATIONS

Facility Samplers

LABORATORY/PRICE_CODE/PRIORITY TURNAROUND/REQUIRED TURNAROUND/DATA DELIVERABLE

Primary / 222-S Lab Operations / 8P / 75 Days / 75 Days / Summary

SAF COMMENT

** The applicable FSAP is RPP-PLAN-40564, Revision 2 and the applicable SAF is RPP-PLAN-38777, Revision 1.

222-S will transmit copies of all COCs to Andrew Templeton and Harold Sydnor.
Final data package should be a Format VI with QA verification. Both Required and Priority Turnaround Time for 222S should be changed to 120 days.

All secondary analytes listed in RPP-PLAN-38777 Tables 4-2 and 4-5 will be reported in the data package and electronically when the value is greater than the detection limit.

Quality Control parameters for constituents are listed in RPP-PLAN-38777 Table 5-1.
Required detection limits for Radionuclides are listed in RPP-Plan-38777 Table 5-2.
Required detection limits for Non-Radionuclides are listed in RPP-Plan-38777 Table 5-3.
Target detection limits for Primary Radionuclides are listed in RPP-Plan-38777 Table 5-4.
Target detection limits for Primary Chemicals are listed in RPP-Plan-38777 Table 5-5.

Only samples from intervals within the top 15 ft. will be analyzed for pesticides and petroleum analytes.

When collecting a surface sample, the sample will be placed in a 500 ml glass jar. The same analyses will be performed as on the liners. Soil particles with diameters great than 0.25" cannot be used for analysis; therefore, the samplers will make an effort to remove particles greater than 0.25". Duplicate samples shall be collected at all surface sampling locations.

SAF REVISION COMMENT

Rev 3 - changed order of analysis to list pH first for liner so holding time prints on COC as ASAP.
Rev 2 -Removed methanol blank from this SAF and created a new SAF; V10-012. Added % water, % solids, conductivity, and changed how Sr 90 is called out, date pkg changed to Format VI - other non-analytical changes per Andrew Templeton - June 2010
Rev 1 - The SAF was modified to change the Container column from "liner" to "Gs jar/liners" to document that the surface sample would not be in a liner but rather a 500 ml glass jar.

COC COMMENT

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis, and 1 methanol process control sample.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

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Washington River Protection Solutions
SAMPLING AUTHORIZATION FORM

SAF NUM V10-003 **SAF TITLE** WMA C Sampling for CMS **REV** 3

Field Sampling Requirements

Laboratory: 222-S Lab Operations **Matrix: SOIL**

Parameter / Analysis	Reference Method	Container / Volume	VolReq	Preservation	Holding Times
VOA - 5035/8260 (LOW LEVEL) (TF)	8260_VOA_GCMS	Gs* 5X40 mL	Lo-Full QC	Cool <-7C and >-20C	14 Days
VOA - 5035/8260 (HIGH LEVEL) (TF)	8260_VOA_GCMS	Gs* 3X40 mL	Hi-Full QC	MEOH/Cool~4C	14 Days
pH (Soil) - 9045	9045_PH	Liners/G jar 3X160 g	Full QC	Cool~6C	ASAP
Semi-VOA - 8270 Complete (TF)	8270_SVOA_GCMS		Full QC		14/40 Days
TPH-Gasoline Range - WTPH-G	WTPH_GASOLINE		Full QC		14 Days
TPH-Diesel Range - WTPH-D	WTPH_DIESEL		Full QC		14/40 Days
PCBs - 8082	8082_PCB_GC		Full QC		None/1 yr
Pesticides - 8081 (TF)	8081_PEST_GC		Full QC		14/40 Days
1668 PCB CONGENER (TCL)	1668A_PCB_CONGENER		Full QC		14/40 Days
ICP Metals - 6010 (SW-846) (TF)	6010_METALS_ICP		Full QC		6 Months
Mercury - 7471 - (CV) (TF)	7471_HG_CVAA		Full QC		28 Days
300.7_AMMONIUM (TF)	300.7_CATIONS_IC		Full QC		7 Days
IC Anions - 9056	9056_ANIONS_IC		Full QC		28 Days/48 Hours
Sulfide - 9215	9215_SULFIDE		Full QC		7 Days
Total Cyanide - 9014 (TF)	9014_CYANIDE		Full QC		14 Days
Americium-241 (TF)	AMCMISO_EIE_PLT_AEA		Full QC		6 Months
C-14	C14_LSC		Full QC		6 Months
CURIUM	AMCMISO_EIE_PLT_AEA		Full QC		6 Months
GAMMA ENERGY ANALYSIS (TF)	GAMMA_GS		Full QC		6 Months
H3 - TRITIUM	TRITIUM_DIST_LSC		Full QC		6 Months
I129_SEP_GEA (TF)	I129_SEP_GEA		Full QC		6 Months
Isotopic Plutonium Plutonium-238, Plutonium-239/240	PUISO_PLATE_AEA		Full QC		6 Months

DATE OF PRINT 07/27/2010 SAF STATUS Revised STATUS DATE 7/27/2010 10:45:00 PAGE 2 of 3

Washington River Protection Solutions
SAMPLING AUTHORIZATION FORM

SAF NUM V10-003 **SAF TITLE** WMA C Sampling for CMS **REV** 3

Field Sampling Requirements

Laboratory: 222-S Lab Operations **Matrix: SOIL**

Parameter / Analysis	Reference Method	Container / Volume	VolReq	Preservation	Holding Times
Nickel-63 (TF)	NI63_LSC		Full QC		6 Months
RADISO_ICPMS (TF)	RADISOTOPES_ICPMS		Full QC		6 Months
Selenium-79 (TF)	SE79_SEP_IE_LSC		Full QC		6 Months
Strontium-90	SRTOT_SEP_PRECIP_GPC		Full QC		6 Months
Conductivity - 9050_WE	9050_CONDUCT		Full QC		28 Days
Percent Solids (TF)	%SOLIDS		Full QC		None
Percent Water (TF)	D2216_%MOIS		Full QC		None
Rad Screen	RADSCREEN	G/P 60 mL	Full QC	None	6 Months

Key to Container Types

G = Glass
Gs = Glass w/ septum cap
Gs* = Glass w/ septum cap- no head space in container
P = Plastic (Polyethylene)
aG = Amber Glass
aGs = Amber Glass w/ septum cap
aGs* = Amber Glass w/ septum cap- no head space in container
aG/T = Amber Glass w/ Teflon Lined Lid

Washington River Protection Solutions
SAMPLING AUTHORIZATION FORM

SAF NUM V10-012 **SAF TITLE** WMA C Sampling for CMS - Methanol Process Control Sample **REV** 0

PROJECT	WMA C		
PROGRAM/PROJECT TYPE	RCRA Closure CMS		
OPERABLE UNIT	NONE		
REQUESTER	TEMPLETON, AM	**CHARGE CODES**	
TASK MANAGER	SYDNOR, HA		
PROJECT COORDINATOR	BERLIN, PC		
ESTIMATED START DATE	6/3/2010	**SAMPLE AREA**	200 East
ESTIMATED COMPLETION DATE	1/1/2012	**MATRIX**	OTHER LIQUID
ESTIMATED NUMBER OF SAMPLES	30		

SAMPLING ORGANIZATIONS

Facility Samplers

LABORATORY/PRICE_CODE/PRIORITY TURNAROUND/REQUIRED TURNAROUND/DATA DELIVERABLE

Primary / 222-S Lab Operations / 9P / 75 Days / 75 Days / Summary

SAF COMMENT

** This is a new SAF created to separate the methanol process control samples from the VOA samples taken for soils (this was previously in V10-003).

** The applicable FSAP is RPP-PLAN-40564, Revision 2 and the applicable SAP is RPP-PLAN-38777, Revision 1.

222S will transmit copies of all COCs to Andrew Templeton and Harold Sydnor.
Final data package shoud be Format VI with QA verification. Both Required and Priority Turnaround Time for 222 S should be changed to 120 days.

SAF REVISION COMMENT

COC COMMENT

** All VOA samples will be collected using EPA Method 5035A.

** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

Washington River Protection Solutions
SAMPLING AUTHORIZATION FORM

SAF NUM V10-012 **SAF TITLE** WMA C Sampling for CMS - Methanol Process Control Sample **REV** 0

Field Sampling Requirements

Laboratory: 222-S Lab Operations **Matrix: OTHER LIQUID**

Parameter / Analysis	Reference Method	Container / Volume	VolReq	Preservation	Holding Times
VOA - 5035/8260 (TCL) (TF)	8260_VOA_GCMS	Gs* 40 mL	Full QC	Cool~4C	14 Days

Key to Container Types

G = Glass
Gs = Glass w/ septum cap
Gs* = Glass w/ septum cap- no head space in container
P = Plastic (Polyethylene)
aG = Amber Glass
aGs = Amber Glass w/ septum cap
aGs* = Amber Glass w/ septum cap- no head space in container
aG/T = Amber Glass w/ Teflon Lined Lid

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev EE.0

Date Samples Received: 7.7.10 Group #: 20100520, 522

Number of Samples: 2 sets C-FARM VADOSE

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on file
Check that outer custody seal is intact, if present		✓	
Record cooler temperature in centigrade, as appropriate	0°C ice		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials DPR Date 7-7-10

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-105	PAGE 1 OF 1
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Trip Blank 1	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-09-000001	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	HCl or H2SO4 to pH <2/Cool<6°
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGa*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D01	WATER	7/7/10	1025	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM BC Ekstrom BC Campbell	DATE/TIME 7/7/10 1215	RECEIVED BY/STORED IN RBStade RBStade 7-7-10	DATE/TIME 1215	0°C DS GRN# 20100522 Sam # S10V001266
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-113	PAGE 1 OF 1
COLLECTOR E.Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Field Blank 1	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFKS-09-003	FIELD LOGBOOK NO. TFV2-09-000001	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2 (Ind.w/C)
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGa*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D11	WATER	7/7/10	1030	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM BC Ekstrom	DATE/TIME 7/7/10 12:15	RECEIVED BY/STORED IN RHStoebe	DATE/TIME 7-7-10 12:15	OC O pH Grp # 20100522 Sam # S10V001256
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-013-051	PAGE: 1 OF 1
COLLECTOR: Ekstrom / Campbell	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 9P	DATA TURNAROUND: 75 Days / 75 Days
SAMPLING LOCATION: C7672 Surface	PROJECT DESIGNATION: WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO.: V10-012	AIR QUALITY: ☐	
ICE CHEST NO.: TFYS-09-003	FIELD LOGBOOK NO.: TFYZ-09-000001	ACTUAL SAMPLE DEPTH: Surface	COA: N/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool<4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TF)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CL0	OTHER LIQUID	7/7/10	1030	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: BC Ekstrom BC Ekstrom	DATE/TIME: 7/7/10 1215	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 7.7.10 1215
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

0 V
0 pH

CAB# 20100520
Seal# S10V001224

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-244	PAGE 1 OF 1
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Surface	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DU=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF)	VOA - 5035/8260 (HIGH LEVEL) (TF)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26JL2	SOIL	7/7/10	1030	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
BE Ekstrom BE Ekstrom	7/7/10 1215	[illegible]	7-7-10 12:15
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, and 5 bottles for low level analysis
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

0V
0 OL PK GRB 20100520
7 Samp# S10V001222
" 1223

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-243	PAGE 1 OF 2
COLLECTOR Elstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Surface	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH surface	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	G/P
		NO. OF CONTAINER(S)	1
		VOLUME	500mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26JK2	SOIL	7/7/10	1030	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
BE Elstrom BE Elstrom	7/7/10 1215	RFS/EGLE RFS/EGLE	7-7-10 1215	0°C GB# 20100520 Sam S10V001225
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-243	PAGE 2 OF 2
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Surface	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFIZ-09-00001	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7672 Surface		
Sampler Initials:	I.V. / D.H.	**Date:**	7-7-10
Scale Number:	820-66-06-002	**Cal. Due Date:**	11-09-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26JL2	K	N/A	N/A	26.79	33.79	7.00	No Methanol
B26JL2	L	N/A	N/A	26.68	32.89	6.21	No Methanol
B26JL2	M	N/A	N/A	26.79	34.13	7.34	No Methanol
B26JL2	N	N/A	N/A	26.76	33.26	6.50	No Methanol
B26JL2	P	N/A	N/A	26.77	32.57	5.80	No Methanol
B26JL2	W	36.892	36.95	37.34	42.19	4.85	10 ml
B26JL2	X	37.038	37.10	37.47	43.31	5.84	10 ml
B26JL2	Y	36.973	37.04	37.40	43.62	6.22	10 ml
B26CL0	*	37.072	37.15	37.52	N/A	N/A	10 ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between - 4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

Type	Document No.	Rev/Mod	Release Date	Page
CONTINUOUS	TO-080-901	A-3	05/10/2010	18 of 18

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-052	PAGE 1 OF 1
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH Surface Dup	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIRBILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gr*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CL1	OTHER LIQUID	7/7/10	1030	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM BO Ekstrom BR Ekstrom	DATE/TIME 7/7/10 12K	RECEIVED BY/STORED IN RJ Steele RJ Steele	DATE/TIME 7-7-10 1215	** All VOA samples will be collected using EPA Method 5035A. ** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected. OV — Grp# 10100520 O Pk Sam# 510V001241
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-246	PAGE 1 OF 1
COLLECTOR Elstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH Surface Dup	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SD=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gs*	Gs*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF):	VOA - 5035/8260 (HIGH LEVEL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26JL3	SOIL	7/7/10	1030	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Elstrom SE Elstrom	DATE/TIME 7/7/10 1215	RECEIVED BY/STORED IN RHStodd RHStodd	DATE/TIME 7-7-10 1215
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, and 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

0°C
RK 0°C
7

LRP # 20100520
SAM# 510U00 1239
1240

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-249	PAGE 1 OF 1
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P	DATA TURNAROUND
SAMPLING LOCATION C7672 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH Surface Dup	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	G/P
		NO. OF CONTAINER(S)	1
		VOLUME	500mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26JK3	SOIL	7/7/10	1030	✓

CHAIN OF POSSESSION		SIGN/PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RB Ekstrom RB Ekstr. 7/7	10 1215	RL Steele RL Steele	7-7-10 1215	GRP# 20100520
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SCM# 510V001242
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-245	PAGE 2 OF 2
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-00000	ACTUAL SAMPLE DEPTH Surface Dup	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7672 Surface Dupe		
Sampler Initials:	I.V./DH.	**Date:**	7-7-10
Scale Number:	820-66-06-602	**Cal. Due Date:**	11-09-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams) 32.96	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26JL3	K	N/A	N/A	26.63	~~26.88~~ W.7-7-10 IV.	6.23	No Methanol
B26JL3	L	N/A	N/A	26.68	33.13	6.45	No Methanol
B26JL3	M	N/A	N/A	26.70	32.58	5.88	No Methanol
B26JL3	N	N/A	N/A	26.75	34.17	7.42	No Methanol
B26JL3	P	N/A	N/A	26.65	32.85	6.20	No Methanol
B26JL3	W	37.146	37.19	37.58	43.36	5.78	10 ml
B26JL3	X	37.035	37.10	37.49	43.70	6.21	10 ml
B26JL3	Y	37.144	37.22	37.60	43.83	6.23	10 ml
B26CL1	*	37.008	37.08	37.45	N/A	N/A	10 ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between - 4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 66.0

Date Samples Received: 7-8-10 Group #: 20100520

Number of Samples: 2 sets C FARM ✓ ADOSC ↓ 521 522

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on File
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	0.2		☐ Check if no cooler and/or no ice
Samples are intact and in good condition			If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials DPR Date 7-8-10

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-106	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Trip Blank 2	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 5-7	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	HCl or H2SO4 to pH <2/Cool=4°C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28D02	WATER	7-8-10	0825	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Campbell C-phell	DATE/TIME 7-8-10 1220	RECEIVED BY/STORED IN RHHolt RHHolt	DATE/TIME 7-8-10 1220	OK GRP# 20100522 SAM# S10V001267
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-116	PAGE 1 OF 1
COLLECTOR: Campbell / Harris	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 7P	DATA TURNAROUND
SAMPLING LOCATION: C7672 Field Blank 2	PROJECT DESIGNATION: WMA C Sampling for CMS - QC Sampling		SAF NO.: V10-002	AIR QUALITY: ☐	75 Days / 75 Days
ICE CHEST NO.: TFV2-09-003 ~~000000~~ BC 7-8-10	FIELD LOGBOOK NO.: TFV2-09-000001	ACTUAL SAMPLE DEPTH: 5-7	COA: n/a	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool≤6°C
A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D12	WATER	~~7-7-10~~ 7-8-10	0840	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: Campbell C-Campbell	DATE/TIME: 7-8-10 1220	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 7-8-10 1220	0 pK GRP# 20100522 Sam# S10V001257
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-021	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I001	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFV2-09-003	FIELD LOGBOOK NO. TFV2-09-000001	ACTUAL SAMPLE DEPTH 5-7	COA n/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	GP
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CJ0	OTHER LIQUID	7-8-10	0940	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chad Campbell	7-8-10 1220	Richard Ritsteole	7-8-10 1220
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

OK CRP# 20100520
SAM# 510U001278

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-181	PAGE 1 OF 1
COLLECTOR: Campbell / Harris	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 8P	DATA TURNAROUND
SAMPLING LOCATION: C7672 I001	PROJECT DESIGNATION: WMA C Sampling for CMS		SAF NO.: V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO.: TFV2-09-003	FIELD LOGBOOK NO.: TFV2-09-000001	ACTUAL SAMPLE DEPTH: 5-7	COA: n/a	METHOD OF SHIPMENT: Govt. Vehicle	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: n/a		BILL OF LADING/AIR BILL NO.: n/a		

MATRIX*: A=Air, DL=Drums Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <-7C and >-20C	MEOH/Cool-4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gs*	Gs*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF)	VOA - 5035/8260 (HIGH LEVEL) (TF)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C89	SOIL	7-8-10	0940	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Campbell C-pbell	DATE/TIME: 7-8-10 1220	RECEIVED BY/STORED IN: R.L. Steele R.L.Steele	DATE/TIME: 7-8-10 1220
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

O.C. GRP# 20100520
SAM# S10V001276
S10V001277

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-180	PAGE 1 OF 2
COLLECTOR Campbell/Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I001	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV2-09-003	FIELD LOGBOOK NO. TFV2-09-000001	ACTUAL SAMPLE DEPTH 5-7	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gls jar/Liners
		NO. OF CONTAINER(S)	2
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C68	SOIL	7-8-10	0940	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Campbell Campbell	DATE/TIME 7-8-10 1220	RECEIVED BY/STORED IN Richard Abbegle	DATE/TIME 7-8-10 1220	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS GRP# 20100520 SAM# ~~S10V00 1278~~ RAbbegle 7.8.10 ~~S10V00 1279~~ S10V00 1280 S10V00 1281
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-180	PAGE 2 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I001	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TEV2-09-003	FIELD LOGBOOK NO. TEV2-09-00001	ACTUAL SAMPLE DEPTH 5-7	COA n/a	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/a		BILL OF LADING/AIR BILL NO. n/a		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	Q-7672 / I001		
Sampler Initials:	CDH, BC	Date:	7-8-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-09-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C69	K	N/A	N/A	26.71	32.75	6.04	No Methanol
B26C69	L	N/A	N/A	26.78	31.89	5.11	No Methanol
B26C69	M	N/A	N/A	26.83	30.51	3.68	No Methanol
B26C69	N	N/A	N/A	26.81	32.89	6.08	No Methanol
B26C69	P	N/A	N/A	26.75	31.34	4.59	No Methanol
B26C69	W	36.917	37.06	37.46	41.46	4.00	10 ml.
B26C69	X	37.016	37.15	37.54	43.58	6.04	10 ml.
B26C69	Y	36.985	37.11	37.49	43.37	5.88	10 ml.
B26CJ0	*	36.962	37.11	37.49	N/A	N/A	10 ml.

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between - 4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-622	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I002	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFV2-09-003	FIELD LOGBOOK NO. TFV2-09-000001	ACTUAL SAMPLE DEPTH 10-12	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	GP*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TF)s

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CJ1	OTHER LIQUID	7-8-10	1055	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Cpl C-phell	7-8-10 1220	Allied Affleck	7-8-10 1220
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

10 C

GRP# 20100520
Sam# 510V001298

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-183	PAGE 1 OF 1
COLLECTOR Campbell / Harms	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I002	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV2-09-003	FIELD LOGBOOK NO. TFV2-09-000001	ACTUAL SAMPLE DEPTH 10-12	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MED-1/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF):	VOA - 5035/8260 (HIGH LEVEL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C71	SOIL	7-8-10	1055	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Campbell C-pbell	DATE/TIME 7-8-10 1220	RECEIVED BY/STORED IN Alfred R Steele	DATE/TIME 7-8-10 1220
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

GRP# 20100520
SAM# 510V00 1296
Y 1297

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-182	PAGE 1 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 1002	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV2-09-003	FIELD LOGBOOK NO. TFV2-09-00001	ACTUAL SAMPLE DEPTH 10-12	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C70	SOIL	7-8-10	1055	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Chad Campbell	DATE/TIME 7-8-10 1220	RECEIVED BY/STORED IN	DATE/TIME 7-8-10 1220	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS -0 C Rhodes GRP# 2010 0520 SAM# 510V00 1299 1300 1301
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-182	PAGE 2 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I002	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV2-09-003	FIELD LOGBOOK NO. TFV2-09-000001	ACTUAL SAMPLE DEPTH 10-12	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

5/10/2010 1:54 PM	WORKING COPY

VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-2672 / I002		
Sampler Initials:		**Date:**	7-8-10
Scale Number:	820-66-06-002	**Cal. Due Date:**	11-09-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C71	K	N/A	N/A	26.87	33.19	6.32	No Methanol
B26C71	L	N/A	N/A	26.87	31.71	4.84	No Methanol
B26C71	M	N/A	N/A	26.82	33.23	6.41	No Methanol
B26C71	N	N/A	N/A	26.74	31.01	4.27	No Methanol
B26C71	P	N/A	N/A	26.78	30.79	4.01	No Methanol
B26C71	W	37.197	37.33	37.73	43.98	6.25	10 ml.
B26C71	X	37.507	37.65	38.04	42.62	4.58	10 ml.
B26C71	Y	37.205	37.32	37.72	41.54	3.82	10 ml.
B26C71	*	37.079	37.20	37.60	N/A	N/A	10 ml.

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between - 4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 66.0

Date Samples Received: 7.12.10 Group #: 20100529 Y 530

Number of Samples: 1 Set Equipment Blank VOAs (18)

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COD provided?	✓		
RSR provided?		✓	
Verify GKI is complete		✓	
Check that outer custody seal is intact, if present		✓	
Record cooler temperature in centigrade, as appropriate	1.1°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling	↓		
• Sampling location or origin	↓		
• Container type, size, and number	↓		
• Analysis request is clear	↓		
• Signature of persons relinquishing and receiving samples	↓		
• Date and/or time of sample custody exchange	↓		
Verify that sample numbers on containers match the COC and/or RSA	↓		
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? Yes PM Initials EPR Date 7-13-10

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	V10-002-043	PAGE 1 OF 2

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 7P	DATA TURNAROUND
Campbell/Ekstrom/Harris	SYDNOR, HA	373-3967	BERLIN, PC	AIR QUALITY ☐	7S Days / 7S Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C7668 Equipment Blank	WMA C Sampling for CMS - QC Sampling		V10-002		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
TFVS-09-003/TFVS-09-002	TFVZ-09-000001	Equipment	N/A	GOVERNMENT VEHICLE	
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
222-S Lab Operations	N/A		N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HCl or H2SO4 to pH <2/Cool~4C	Cool~6C	Cool~6C	HCl to pH <2/Cool~6C	Cool~6C	Cool~6C	HNO3 to pH <2	H2SO4 to pH <2 Cool~6C Ra. 1-26-10	Cool~6C	ZnAc+NaOH to pH > 9/Cool~6C
TYPE OF CONTAINER	aGa*	aG	aG	aGa*	aG	aG	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	3	1	1	3	2	3	1	1	1	1
VOLUME	40mL	1000mL	1000mL	40mL	1000mL	1000mL	500mL	250mL	500mL	500mL
SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF);	Semi-VOA - 8270 Complete (TF);	TPH-Diesel Range - WTPH-D;	TPH-Gasoline Range - WTPH-G;	Pesticides - 8081 (TF);	PCBs - 8082;	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	350.7_AMMONIUM (TF);	IC Anions - 9056; pH (Water) - 9040 (TF);	Sulfide - 9215;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B23V95	WATER	7-12-10	1020	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S10V00436 -	1450												—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Calvin Campbell	7-12-10 1345	el Steele	7-12-10 1345
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

(1)ICP Metals - 6010 (SW-846) (TF); Mercury - 7470 - (CV) (TF); RADISO_ICPMS (TF);

22252010052 9
22252010053 0 - offsite

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(01/06)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-043	PAGE 2 OF 2
COLLECTOR: Campbell / Harris / Ekstrom	COMPANY CONTACT: SYDNOR, HA	TELEPHONE NO.: 373-3967	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 7P	DATA TURNAROUND: 7S Days / 7S Days
SAMPLING LOCATION: C7668 Equipment Blank	PROJECT DESIGNATION: WMA C Sampling for CMS - QC Sampling		SAF NO.: V10-002	AIR QUALITY: ☐	
ICE CHEST NO.: TFVS-09-002/TFVS-09-003	FIELD LOGBOOK NO.: TFVZ-09-000001	ACTUAL SAMPLE DEPTH: Equipment	COA: N/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE:

PRESERVATION	NaOH to pH >= 12/Cool~6C	HNO3 to pH <2	None	Cool~4C	Cool~4C					
TYPE OF CONTAINER	G/P	G/P	G/P	G	G/P					
NO. OF CONTAINER(S)	1	2	1	3	1					
VOLUME	250mL	1000mL	1000mL	40ml	250ml					
SAMPLE ANALYSIS	Total Cyanide - 9014 (TF);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	K-14; H3 - TRITIUM; DL29_SEP_GSA (TF);	Ethylene Glycol BC 6-23-10	OBP/ MBP BC 6-23-10					

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B23V95	WATER	7-12-10	1020	✓	✓	✓	✓	✓					

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: C-Ohed	DATE/TIME: 7-12-10 1345	RECEIVED BY/STORED IN: Ekstrom	DATE/TIME: 7-12-10 1345
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS: (2)GAMMA ENERGY ANALYSIS (TF); Americium-241 (TF); CURIUM; Nickel-63 (TF); Selenium-79 (TF); Strontium-89,90 -- Sr-90; Isotopic Plutonium (Plutonium-239/240, Plutonium-238)

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6005-628(01/06)

07/12/2010 14:05

222-S
WRPS, P. O. Box 850
Richland, WA
Phone: (509) 376-5029 / FAX: (509) 372-1878

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Sample Group: 20100530

Specification Entity: C Farm WMC 2010-2 - CACN/COA 26B/26B

The following samples were received from you on. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using222-S.

Sample Tests Scheduled	Customer Sample ID	Matrix	Sample Date
S10V001445 SHIP OUTSIDE LAB	B23V95	LIQUID	
S10V001446 SHIP OUTSIDE LAB	B23V95	LIQUID	
S10V001447 SHIP OUTSIDE LAB	B23V95	LIQUID	
S10V001448 SHIP OUTSIDE LAB	B23V95	LIQUID	
S10V001449 SHIP OUTSIDE LAB	B23V95	LIQUID	
S10V001450 SHIP OUTSIDE LAB	B23V95	LIQUID	

Test Acronym Description

Test Acronym	Description
SHIP OUTSIDE LAB	Shipping Samples to an Outside Laboratory

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev EG.0

Date Samples Received: 7.13.10 Group #: 20100520

Number of Samples: (2) c-f gram vadosesets, (2) samplers 20100522

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on file
Check that outer custody seal is intact, if present		✓	
Record cooler temperature in centigrade, as appropriate	4°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling	✓		
• Sampling location or origin	✓		
• Container type, size, and number	✓		
• Analysis request is clear	✓		
• Signature of persons relinquishing and receiving samples	✓		
• Date and/or time of sample custody exchange	✓		
Verify that sample numbers on containers match the COC and/or RSA	✓		
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials [illegible] Date 7/13/2010

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-107	PAGE 1 OF 1
COLLECTOR: Elstrom / Harris / Campbell	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 7P	DATA TURNAROUND
SAMPLING LOCATION: C7672 Trip Blank 3	PROJECT DESIGNATION: WMA C Sampling for CMS - QC Sampling		SAF NO.: V10-002	AIR QUALITY: ☐	75 Days / 75 Days
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFVZ-09-000001	ACTUAL SAMPLE DEPTH: 14-16ft	COA: N/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	HCl or H2SO4 to pH <2/Cooled/C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D03	WATER	7/12/10	0900	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2°C pH CRP# 20100522 Sim# 510V00 1268
Gill Campbell	7-13-10 1300	Richard Elstede	7-13-10 1300	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-L17	PAGE 1 OF 1
COLLECTOR Sleztrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Field Blank 3	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 14-16ft	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool=4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGa*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D13	WATER	7/13/10	0925	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Scott C Campbell	DATE/TIME 7-13-10 1300	RECEIVED BY/STORED IN Richard Reisteele	DATE/TIME 7-13-10 1300	2°C PK GRP # 20100522 SAM # S10V001258
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-024	PAGE 1 OF 1
COLLECTOR: Ekstrom / Campbell	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 9P	DATA TURNAROUND
SAMPLING LOCATION: C7672 I004	PROJECT DESIGNATION: WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO.: V10-012	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFVZ-09-000001	ACTUAL SAMPLE DEPTH: 14-16 ft	COA: N/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TT);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CJ3	OTHER LIQUID	7/13/10	0915	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Campbell Campbell	DATE/TIME: 7-13-10 1300	RECEIVED BY/STORED IN: R Steele R Steele	DATE/TIME: 7-13-10 1300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

X RK 7-13-10

oc

2 RK

GRP# 20100520

SAM# S10V001338

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-187	PAGE 1 OF 1
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I004	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-000001	ACTUAL SAMPLE DEPTH 14-16 ft	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5 ✓	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TP);	VOA - 5035/8260 (HIGH LEVEL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C75	SOIL	7/13/10	0915	✓	✓

CHAIN OF POSSESSION		SIGN/PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Gabe Campbell	DATE/TIME 7-13-10 1300	RECEIVED BY/STORED IN Rita Steele	DATE/TIME 7-13-10 1300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.

** The laboratory is to use one of the low level VOA bottles for moisture content determination.

** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

2°C / 0°C / 4 µS

GRP# 20100520
SAM# S10V001336
Y 1337

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-186	PAGE 1 OF 2
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 1004	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 14-16 ft	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Glass/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C74	SOIL	7/13/10	0915	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Gabe C-Campbell	DATE/TIME 7-13-10 1300	RECEIVED BY/STORED IN Patrick Ekstrom	DATE/TIME 7-13-10 1300	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS 2 ic 2 VK GRP # 20100520 SAM # 510V00 1339 1340 1341
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-186	PAGE 2 OF 2
COLLECTOR Ekstron / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE BP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I004	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-013	FIELD LOGBOOK NO. TFVZ-09-00D001	ACTUAL SAMPLE DEPTH 14-16 Ft	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium (Plutonium-238, Plutonium-239/240); Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

5/10/2010 1:54 PM	WORKING COPY
VOC Soil and Sediment Sampling	

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7672 / I004		
Sampler Initials:	BL, BC	**Date:**	7-13-10
Scale Number:	820-66-06-002	**Cal. Due Date:**	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C75	K	N/A	N/A	26.90	31.71	4.81	No Methanol
B26C75	L	N/A	N/A	26.81	30.74	3.93	No Methanol
B26C75	M	N/A	N/A	26.81	30.80	3.99	No Methanol
B26C75	N	N/A	N/A	26.78	31.93	5.15	No Methanol
B26C75	P	N/A	N/A	26.90	32.45	5.55	No Methanol
B26C75	W	36.777	36.85	37.15	42.78	5.63	10 ml.
B26C75	X	37.042	37.15	37.55	41.12	3.57	10 ml.
B26C75	Y	37.134	37.24	37.64	42.79	5.15	10 ml.
B26C73	*	36.859	36.98	37.89	N/A	N/A	10 ml.

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-025	PAGE 1 OF 1
COLLECTOR HARRIS / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I005	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 37-39 ft	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CJ4	OTHER LIQUID	7/13/10	1130	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Gabriel Campbell	DATE/TIME 7-13-10 1300	RECEIVED BY/STORED IN Robert Rittelle	DATE/TIME 7-13-10 1300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

2°C
RK

GRP# 20100520
SAM# S10V00 1358

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-189	PAGE 1 OF 1
COLLECTOR Harris / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I005	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 37-39 ft	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gal*	Gal*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF);	VOA - 5035/8260 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C77	SOIL	7/13/10	1130	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Gabe Campbell	DATE/TIME 7-13-10 1300	RECEIVED BY/STORED IN Richard Ritsteele	DATE/TIME 7-13-10 1300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

2L / 2L NK / A

GRP# 20100520
SAM# S10V001356
Y 1357

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-188	PAGE 1 OF 2
COLLECTOR HARRIS/Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE BP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I005	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-09-000001	ACTUAL SAMPLE DEPTH 37-39.A	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	GL Jar/Liners
		NO. OF CONTAINER(S)	1 7/12/10 All Liners placed in 500mL JAR.
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C76	SOIL	7/13/10	1130	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Campbell C-pbell	DATE/TIME 7-13-10 1300	RECEIVED BY/STORED IN RASTEGG	DATE/TIME 7-13-10 1300	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS °C 2 PK GRP# 20100520
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-188	PAGE 2 OF 2
COLLECTOR HARRIS / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I005	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFIR-09-000001	ACTUAL SAMPLE DEPTH 37-39 ft.	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C7672 ±005						
Sampler Initials:	BC/DH				Date:	7-13-10	
Scale Number:	020-66-06-002				Cal. Due Date:	11-09-10	
Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C77	K	N/A	N/A	26.68	31.53	4.85	No Methanol
B26C77	L	N/A	N/A	26.82	31.14	4.32	No Methanol
B26C77	M	N/A	N/A	26.91	31.32	4.41	No Methanol
B26C77	N	N/A	N/A	26.88	30.61	3.73	No Methanol
B26C77	P	N/A	N/A	26.81	30.91	4.10	No Methanol
B26C77	W	36.848	36.96	37.35	41.45	4.10	10 ml.
B26C77	X	37.013	36.97	37.34	41.96	4.62	10 ml.
B26C77	Y	37.473	37.45	37.84	42.16	4.32	10 ml.
	7-13-10	~~36.828~~	~~36.92~~	BC			
B26C74	*	36.828	36.92	37.32	N/A	N/A	10 ml.

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

VADOSE ZONE
CHARACTERIZATION CHANGE NOTICE

Document: RPP-PLAN-40564 Rev 2 **Change Number:** WMAC-0010 **ECN to TSAP Required?** Y / N

Requestor: Andrew M. Templeton **Date:** 07-24-10

Original Requirement: At each sample depth, samples are collected from the shoe and three liners. The liners are removed from the sampler, percent recovery estimated and then the samplers are capped, sealed and labeled for transport to the laboratory.

Samples Impacted: Samples collected in C Farm at Site E (C7672), depth 37-39 ft. bgs.

Proposed Change: Due to the compact nature of the soil, the liners could not be removed from the sampler. The VOC samples were collected from the shoe, then the soil was removed/extruded from the liners while still in the sampler and ~~containerized into~~ placed in a single 500 ml glass jar for delivery to the laboratory.
A.M.T. 7-29-10

Reason for Change: Compact soil

Date Change Effective: 7-13-10

Schedule Impact: None

Authorization:

Vadose Zone POC (Print/Sign): A.M. Templeton **Date:** 7-29-10

Vadose Zone Quality Assurance (Print/Sign): K.J. Dunbar **Date:** 7-29-10

222-S Project Coordinator (Print/Sign): S.G. McKinney **Date:** 7-29-10

ATL Project Coordinator (Print/Sign): G.P. Ritenour for GPR **Date:** 7/28/2010

Other (Optional, Print/Sign): **Date:**

cc: S. J. Eberlein, K. M. Hall, Dana Stewart, Dave Myers, Penny Berlin, Eric Wyse, Mike Connelly, Harold Sydnor, Cindy Tabor

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev EG.0

Date Samples Received: 7.14.10 Group #: 20100520

Number of Samples: (1) set C-FARM VADOSE (1) Sampler

Sample Custodian: RHutts

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	4°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials LA Date 7.14.10

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-108	PAGE 1 OF 1
COLLECTOR Harris / Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5599	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Trip Blank 4	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS - 09- 003	FIELD LOGBOOK NO. TFVZ - 09- 000001	ACTUAL SAMPLE DEPTH 73' - 75'	COA n/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2(Cool all)
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGr*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (17);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D04	WATER	7-14-10	0930	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris	DATE/TIME 7-14-10 1330	RECEIVED BY/STORED IN RJSteele RJSteele	DATE/TIME 7-14-10 1330	4°C RK GRP# 20100522 SAM# S10V00 1269
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-118	PAGE 1 OF 1
COLLECTOR Harris / Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Field Blank4	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-09-000001	ACTUAL SAMPLE DEPTH 73'-75'	COA n/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cooled<C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	8Gs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D14	WATER	7-14-10	10:50	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Hans Dan Harris	DATE/TIME 7-14-10 1330	RECEIVED BY/STORED IN Robert Ritsfield	DATE/TIME 7.14.10 1330	4°C pK GRP# 20100522 SAM# S10V001259
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-026	PAGE 1 OF 1
COLLECTOR Harris / Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 B006	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 73'-75'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gr*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8015/8260 (TCL) (TT)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CJ5	OTHER LIQUID	7-14-10	10:30	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Dr Harris Dan Harris	DATE/TIME 7-14-10 1330	RECEIVED BY/STORED IN Richard R Steele	DATE/TIME 7.14.10 1330
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

4 °C pk Grp# 20100520 Start 510V001378

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-191	PAGE 1 OF 2
COLLECTOR Harris / Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I006	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-005	FIELD LOGBOOK NO. TFV2-09-000001	ACTUAL SAMPLE DEPTH 73'-75'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gl*	Gl*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260/8260 (LOW LEVEL) (TP);	VOA - 5035/8260 (HIGH LEVEL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C79	SOIL	7-14-10	10:30	—	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Dan Adams Dan Adams	7-14-10 1330	RA Steele RA Steele	7-14-10	-10°C 4°C pK
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

CRP# 20100520
SAM# 510V00 1376
Y 1377

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-191	PAGE 2 OF 2
COLLECTOR Harris / Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE BP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I006	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS- 09- 003	FIELD LOGBOOK NO. TFV2-09-000001	ACTUAL SAMPLE DEPTH 78'- 75'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-190	PAGE 1 OF 2
COLLECTOR Harris / Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I006	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 73'-75'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Ga jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C78	SOIL	7-14-10	10:30	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Dan Harris Dan Harris	7-14-10 1230	R L Steele R L Steele	7.14.10 1336	4°C
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	CRT # 20100520
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SAM#S ~~510V000~~ 510V00 1379
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	1380
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	1381
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-190	PAGE 2 OF 2
COLLECTOR Harris/ Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP	DATA TURNAROUND
SAMPLING LOCATION C7672 I006	PROJECT DESIGNATION WMA C Sampling for CHS		SAF NO. V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO. TFVS - 09 - 065	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 73' - 75'	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

5/10/2010 1:54 PM	WORKING COPY
VOC Soil and Sediment Sampling	

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C7672 I006		
Sampler Initials:	BRE	Date:	7/14/10
Scale Number:	820-66-06-002	Cal. Due Date:	11/09/10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C79	K	N/A	N/A	~~26.37~~ 26.19 BRE 7/14/10	31.08	4.89	No Methanol
B26C79	L	N/A	N/A	26.36	30.52	4.16	No Methanol
B26C79	M	N/A	N/A	26.21	30.20	3.99	No Methanol
B26C79	N	N/A	N/A	26.28	30.58	4.30	No Methanol
B26C79	P	N/A	N/A	26.13	30.43	4.30	No Methanol
B26C79	W	37.315	37.18	~~37.48~~ 37.37 BRE 7/14/10	46.13	8.56	10
B26C79	X	37.336	37.25	37.63	41.38	3.75	10
B26C79	Y	37.182	37.12	37.50	42.36	4.86	10
B26CJ5	*	37.646	37.5	37.90	N/A	N/A	~~8.82~~ 8.18 BRE 7/14/10

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between - 4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 66.0

Date Samples Received: 7.15.10 Group #: 20100520

Number of Samples: (1) set C-Farm V4 Dose

Sample Custodian: Rebecca

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓	•	
Verify GKI is complete		✓	on file
Check that outer custody seal is intact, if present			
Record cooler temperature in centigrade, as appropriate	0°C / 3°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition			If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials: AR Date 7-15-2010

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-109	PAGE 1 OF 1
COLLECTOR Campbell / Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Trip Blank 5	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS- 09- 083	FIELD LOGBOOK NO. TFVZ- 09-000001	ACTUAL SAMPLE DEPTH 83'- 85'	COA n/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cooled4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SD=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D05	WATER	7-15-10	0840	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	OV O PK GRP # 20100522 SAM # S10V001270
[signature] Brent C Ekstrom	7.15.10 1030	[signature] RP Steele	7.15.10 1030	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-119	PAGE 1 OF 1
COLLECTOR Campbell / Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 Field Blank 5	PROJECT DESIGNATION WMA C Sampling for CM5 - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-080001	ACTUAL SAMPLE DEPTH 83'-85'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2 (if cooled)
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TPI)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D15	WATER	7-15-10	0900	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	O V OK GRP # 20100522 SAM # 510V001260
Brad Ekstrom Brad Ekstrom	7-15-10 1030	RAStede RAStede	7-15-10 1030	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-027	PAGE 1 OF 1
COLLECTOR Campbell / Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I007	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 83' - 85'	COA n/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gl*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TT)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CJ6	OTHER LIQUID	7-15-10	0925	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM [signature] Brian C Ekstrom	DATE/TIME 7/15/10 1030	RECEIVED BY/STORED IN RE Steele RE Steele	DATE/TIME 7.15.10 1030
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

OUOK

GRP# 20100520
SAM# S10V001398

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-193	PAGE 1 OF 1
COLLECTOR Campbell/ Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I007	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV2- 09- 003	FIELD LOGBOOK NO. TFV2- 09- 000001	ACTUAL SAMPLE DEPTH 83' - 85'	COA N / A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N / A		BILL OF LADING/AIR BILL NO. N / A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF);	VOA - 5035/8260 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C81	SOIL	7-15-10	0925	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Campbell/Ekstrom Sampling C Ekstrom	7-15-10 1030	RL Steele RLSteele	7-15-10 1030
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

3°C / 0°C ✓ GRP# 20100520
Sam# S10V001396
Y 1397

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-192	PAGE 1 OF 2
COLLECTOR Campbell / Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE BP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 I007	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000081	ACTUAL SAMPLE DEPTH 83'-85'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs Jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C80	SOIL	7-15-10	0925	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
[illegible]	7.15.10 1030	RL Steele RLSteele	7.15.10 1030	OU O RS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	GRP # 20100520
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SAM # S10V00 1399
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	1401
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-192	PAGE 2 OF 2
COLLECTOR Campbell / Ekstrom	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE BP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 1007	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS- 09- 003	FIELD LOGBOOK NO. TFVZ- 09-000081	ACTUAL SAMPLE DEPTH 83' - 85'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

5/10/2010 1:54 PM	WORKING COPY

VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C7672 F007		
Sampler Initials:	BC / BE	Date:	7-15-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-09-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C81	K	N/A	N/A	26.39	29.94	3.55	No Methanol
B26C81	L	N/A	N/A	26.41	30.41	4.00	No Methanol
B26C81	M	N/A	N/A	26.54	30.52	3.98	No Methanol
B26C81	N	N/A	N/A	26.22	29.79	3.57	No Methanol
B26C81	P	N/A	N/A	26.47	31.40	4.93	No Methanol
B26C81	W	37.061	37.00	37.40	41.75	4.35	10 ml.
B26C81	X	36.907	36.85	37.23	41.54	4.31	10 ml.
B26C81	Y	37.084	37.02	37.42	42.30	4.88	10 ml.
B26CT6	*	37.110	37.03	37.42	N/A	N/A	10 ml.

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between - 4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev EE.0

Date Samples Received: _____ Group #: 20100520

Number of Samples: 1 set C-Fram VA005C 521 522

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	5.0 / 1.6		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling	✓		
• Sampling location or origin	✓		
• Container type, size, and number	✓		
• Analysis request is clear	✓		
• Signature of persons relinquishing and receiving samples	✓		
• Date and/or time of sample custody exchange	✓		
Verify that sample numbers on containers match the COC and/or RSA	✓		
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials [illegible] Date 7/19/2010

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	V10-002-110	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
HARRIS / Campbell	TEMPLETON, AM	373-5589	BERLIN, PC	7P	
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY**	
C7672 Trip Blank 6	WMA C Sampling for CMS - QC Sampling		V10-002	☐	7S Days / 7S Days

ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT
TFVS-09-003	TFVZ-09-000001	122-124 ft.	N/A	GOVERNMENT VEHICLE

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
222-S Lab Operations	N/A	N/A

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HCl or H2SO4 to pH <2/Cool<4°C
HOLDING TIME	14 Days
TYPE OF CONTAINER	3Gx*
NO. OF CONTAINER(S)	3
VOLUME	40mL
SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B28D06	WATER	7/16/10	0830

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Dan Harris Dan Harris	7-16-10 11 40	RA Stegle RA Stegle	7.16.10 1140	0°C
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

GRP# 20100522
SAM# 510U001271

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-120	PAGE 1 OF 1
COLLECTOR: Harris/Campbell	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 7P	DATA TURNAROUND: 75 Days / 75 Days
SAMPLING LOCATION: C7672 Field Blank 6	PROJECT DESIGNATION: WMA C Sampling for CMS - QC Sampling		SAF NO.: V10-002	AIR QUALITY: ☐	
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFVZ-09-000001	ACTUAL SAMPLE DEPTH: 122'-124'	COA: N/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HCl or H_2SO_4 to pH <2 (Cool to 4°C)
HOLDING TIME	14 Days
TYPE OF CONTAINER	aGs*
NO. OF CONTAINER(S)	3
VOLUME	40mL
SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D16	WATER	7/16/10	0850	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: Dan Harris Dan Harris	DATE/TIME: 7-16-10 1140	RECEIVED BY/STORED IN: RH Hall RH Hall 6/6	DATE/TIME: 7.16.10 1140	0C 1 NC
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	GRP# 26100522
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SAM# 510V001261
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-028	PAGE 1 OF 1
COLLECTOR: Harris / Campbell	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 9P	DATA TURNAROUND: 75 Days / 75 Days
SAMPLING LOCATION: C7672 I008	PROJECT DESIGNATION: WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO.: V10-012	AIR QUALITY:	
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFVZ-09-000001	ACTUAL SAMPLE DEPTH: 122-124 ft	COA: N/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool-4C
HOLDING TIME	14 Days
TYPE OF CONTAINER	Gs*
NO. OF CONTAINER(S)	1
VOLUME	40mL
SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TT)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CJ7	OTHER LIQUID	7/16/10	1045	✓

CHAIN OF POSSESSION	DATE/TIME	SIGN/ PRINT NAMES: RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM: [signature]	7-16-10 1140	RECEIVED BY/STORED IN: [signature]	7-16-10 1140
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

1 OC PK GRP# 20100520
SAM# S10V001418

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-195	PAGE 1 OF 1
COLLECTOR: Harris / Campbell	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: SP	DATA TURNAROUND
SAMPLING LOCATION: C7672 I008	PROJECT DESIGNATION: WMA C Sampling for CMS		SAF NO.: V10-003	AIR QUALITY: ☐	75 Days / 75 Days
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFV2-09-000001	ACTUAL SAMPLE DEPTH: 122-124 ft	COA: N/A	METHOD OF SHIPMENT: Govt. Vehicle	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cold <-7C and >-20C	MEOH/Cool-4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gr*	Gr*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF):	VOA - 5035/8260 (HIGH LEVEL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C83	SOIL	7/16/10	1045	✓	✓

CHAIN OF POSSESSION	DATE/TIME	SIGN/ PRINT NAMES: RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM: Harris, D Harris	7-16-10 1140	RAStEele RAStEele	7.16.10 1140
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

.01/.6 pk Date 20100520
Start 510V00 1416
510V00 1417

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-194	PAGE 1 OF 2
COLLECTOR: HARRIS / Campbell	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: SP	DATA TURNAROUND: 75 Days / 75 Days
SAMPLING LOCATION: C7672 1008	PROJECT DESIGNATION: WMA C Sampling for CMS		SAF NO.: V10-003	AIR QUALITY: ☐	
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFV2-09-000001	ACTUAL SAMPLE DEPTH: 122-124 ft	COA: N/A	METHOD OF SHIPMENT: Govt. Vehicle	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air; DL=Drum Liquids; DS=Drum Solids; L=Liquid; O=Oil; S=Soil; SE=Sediment; T=Tissue; V=Vegetation; W=Water; WI=Wipe; X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool-4C
HOLDING TIME	14/40 Days
TYPE OF CONTAINER	Gl Jar/Liners
NO. OF CONTAINER(S)	3
VOLUME	150g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B28C82	SOIL	7/16/10	1045 ✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Dan Berlin	DATE/TIME: 7-16-10 1140	RECEIVED BY/STORED IN: RL Steele	DATE/TIME: 7-16-10 1140
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

OC GRP# 20100520
LA Sim# 510V001419
1420
6421

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-194	PAGE 2 OF 2
COLLECTOR Harris Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7672 1008	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TPVZ-09-000001	ACTUAL SAMPLE DEPTH 122-124 ft	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

5/10/2010 1:54 PM	WORKING COPY

VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C 7672 / I008		
Sampler Initials:	BC, ~~CDA~~	**Date:**	7-16-10
Scale Number:	820-66-06-002	**Cal. Due Date:**	11-4-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C83	K	N/A	N/A	26.26	30.44	4.18	No Methanol
B26C83	L	N/A	N/A	26.22	30.95	4.73	No Methanol
B26C83	M	N/A	N/A	26.42	31.00	4.58	No Methanol
B26C83	N	N/A	N/A	26.36	31.16	4.80	No Methanol
B26C83	P	N/A	N/A	26.22	30.53	4.31	No Methanol
B26C83	W	36.937	36.86	37.25	42.08	4.83	10 ml.
B26C83	X	37.327	37.26	37.65	42.42	4.77	10 ml.
B26C83	Y	37.349	37.25	37.64	43.18	5.54	10 ml.
B26CJ7	*	37.169	37.11	37.49	N/A	N/A	10 ml.

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 66.0

Date Samples Received: 7-19-10 Group #: 20100 555
Number of Samples: (2 sets) C-Farm Vadose 556 557
Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	0.0 / 0.8		☐ Check if no cooler and/or no ice
Samples are intact and in good condition			If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials MPK Date 7-20-2010

If No, comment on communication and resolution:

Other Comments:

A-5005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-145	PAGE 1 OF 1
COLLECTOR Campbell/Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Trip Blank 1	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-09-000001	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH ≤2/Cool≤4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	8Gs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D41	WATER	7-19-10	0905	—

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: Campbell Campbell DATE/TIME: 7-19-10 1130	RECEIVED BY/STORED IN: RPSteele RPSteele DATE/TIME: 7.19.10 1130	OU O RK GRP# 20100556 SAN# 510V001593
RELINQUISHED BY/REMOVED FROM DATE/TIME	RECEIVED BY/STORED IN DATE/TIME	
RELINQUISHED BY/REMOVED FROM DATE/TIME	RECEIVED BY/STORED IN DATE/TIME	
RELINQUISHED BY/REMOVED FROM DATE/TIME	RECEIVED BY/STORED IN DATE/TIME	
RELINQUISHED BY/REMOVED FROM DATE/TIME	RECEIVED BY/STORED IN DATE/TIME	
RELINQUISHED BY/REMOVED FROM DATE/TIME	RECEIVED BY/STORED IN DATE/TIME	
RELINQUISHED BY/REMOVED FROM DATE/TIME	RECEIVED BY/STORED IN DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-155	PAGE 1 OF 1
COLLECTOR Campbell / Hennis	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Field Blank 1	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-007	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool<4°C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGlr*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D51	WATER	7-19-10	1000	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Campbell C Campbell	DATE/TIME 7-19-10 1130	RECEIVED BY/STORED IN Rebecca Rebecca	DATE/TIME 7.19.10 1130	0 ice 0 RK GRP# 20100556 SAM# S10V001583
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-055	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Surface	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. ~~TFVS-09-007~~ TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH Surface	COA NA	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8015/8260 (TCL) (TPI)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28CL4	OTHER LIQUID	7-19-10	1000	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Campbell C-Campbell	DATE/TIME 7-19-10 1130	RECEIVED BY/STORED IN Robert Rosteeds	DATE/TIME 7.19.10 1630
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

OK

GRP# 20100556
SAM# S10V001665

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-252	PAGE 1 OF 1
COLLECTOR: Campbell / Harris	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5389	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 8P	DATA TURNAROUND: 75 Days / 75 Days
SAMPLING LOCATION: C7676 Surface	PROJECT DESIGNATION: WMA C Sampling for CMS		SAF NO.: V10-003	AIR QUALITY: ☐	
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFV2-09-00001	ACTUAL SAMPLE DEPTH: surface	COA: N/A	METHOD OF SHIPMENT: Govt. Vehicle	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool-4C
A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF);	VOA - 5035/8260 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26JL6	SOIL	7-19-10	1000	/	/

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Campbell Campbell 7-19-10	DATE/TIME: 1130	RECEIVED BY/STORED IN: RKSteele RKSteele 7.19.10	DATE/TIME: 1170
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, and 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

8/6 0 ok GRH 20100556
SMH 510000 1603
Y 1609

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-251	PAGE 1 OF 2
COLLECTOR Campbell/ Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C/676 Surface	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-09-000001	ACTUAL SAMPLE DEPTH surface	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	G/P
		NO. OF CONTAINER(S)	1
		VOLUME	500mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26JK8	SOIL	7-19-10	1000	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Campbell Campbell	7-19-10 1130	Robert Alstocle	7.19.10 1130	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

CRP# 20100556
SAM# S10V001606

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-251	PAGE 2 OF 2
COLLECTOR Campbell/Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Surface	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV5-09-007	FIELD LOGBOOK NO. TFV2-09-010001	ACTUAL SAMPLE DEPTH surface	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-056	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-60001	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. NA		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8015/8260 (TCL) (TF)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CL5	OTHER LIQUID	7/19/10	1000	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Campbell C-Campbell	7-19-10 1130	R Steele RKSteele	7-19-10 1130
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

*** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

O.K. RK

GRP# 20100556
Sam# 510V001622

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-254	PAGE 1 OF 1
COLLECTOR Campbell Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-09-000001	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	HNO3/Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF);	VOA - 5035/8260 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B28JL7	SOIL	7/19/10	1000	✓	✓

CHAIN OF POSSESSION	SIGN/ PRINT NAMES		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Campbell Campbell	7-19-10 1130	[illegible] RISTOG/G	7-19-10 1130
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, and 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

0/0 UK CAPH 20100556
Sam # 510V001620
Y 1621

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-253	PAGE 1 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CHS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool=4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	G/P
		NO. OF CONTAINER(S)	1
		VOLUME	500mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26JK7	SOIL	7/19/10	1000	✓

CHAIN OF POSSESSION		SIGN/-PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Campbell Campbell	DATE/TIME 7-19-10 1130	RECEIVED BY/STORED IN RKSteele RKSteele	DATE/TIME 7-19-10 1130	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS OC O RK GRP# 20100556 SAM# 510V00 1623
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-253	PAGE 2 OF 2
COLLECTOR Campell/Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CHS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFUZ-09-000001	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

36.87

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7676 / Surface						
Sampler Initials:	OH, BC				Date:	7-19-10	
Scale Number:	820-66-06-002				Cal. Due Date:	11-9-10	
Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26JL6	K	N/A	N/A	26.47	31.51	5.04	No Methanol
B26JL6	L	N/A	N/A	26.23	31.60	5.37	No Methanol
B26JL6	M	N/A	N/A	26.26	32.06	5.80	No Methanol
B26JL6	N	N/A	N/A	26.30	31.46	5.16	No Methanol
B26JL6	P	N/A	N/A	26.14	31.37	5.23	No Methanol
B26JL6	W	36.979	36.82	37.23	43.55	6.32	10 ml.
B26JL6	X	37.111	36.97	37.35	43.25	5.90	10 ml.
B26JL6	Y	37.347	37.17	37.57	43.43	5.86	10 ml.
B26CL4	*	37.293	37.13	37.52	N/A	N/A	10 ml.

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight of bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7676 / Surface Dump.		
Sampler Initials:	OH, BC	**Date:**	7-19-10
Scale Number:	820-66-06-002	**Cal. Due Date:**	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26TL7	K	N/A	N/A	26.47	31.86	5.39	No Methanol
B26TL7	L	N/A	N/A	26.40	31.95	5.55	No Methanol
B26TL7	M	N/A	N/A	26.36	31.99	5.63	No Methanol
B26TL7	N	N/A	N/A	26.41	32.58	6.17	No Methanol
B26TL7	P	N/A	N/A	26.13	31.76	5.63	No Methanol
B26TL7	W	37.106	36.94	37.34	42.97	5.63	10 ml.
B26TL7	X	37.247	37.09	37.45	43.13	5.68	10 ml.
B26TL7	Y	37.305	37.17	37.54	43.24	5.70	10 ml.
B26CL5	*	37.206	37.04	37.40	N/A	N/A	10 ml.

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4°C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

Type	Document No.	Rev/Mod	Release Date	Page
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ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev _____

Date Samples Received: 7-20-2010 Group #: 20100556

Number of Samples: 2 VAclass Sets 2 Samples 20100555

Sample Custodian: Tuc Eller

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	Y		
RSR provided?	N		
Verify GKI is complete	N		on - file
Check that outer custody seal is intact, if present	Y		
Record cooler temperature in centigrade, as appropriate	Y		☐ Check if no cooler and/or no ice 0°C & -7°C
Samples are intact and in good condition	Y		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	Y		
• Date and time of sampling	Y		
• Sampling location or origin	Y		
• Container type, size, and number	Y		
• Analysis request is clear	Y		
• Signature of persons relinquishing and receiving samples	Y		
• Date and/or time of sample custody exchange	Y		
Verify that sample numbers on containers match the COC and/or RSA	Y		
Samples stored properly (e.g., refrigeration)	Y		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials CRR Date 7-21-10

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-146	PAGE 1 OF 1
COLLECTOR Elstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Trip Blank 2	PROJECT DESIGNATION WMA C Sampling for CHS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-09-000001	ACTUAL SAMPLE DEPTH 5-7 ft	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool≤6C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP2)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D42	WATER	7/20/10	0825	✓

S10Y001594

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM B.E. Elstrom B.E. Elstrom	DATE/TIME 7/20/10 1110	RECEIVED BY/STORED IN P.O. McCollum	DATE/TIME 7-20-10 @ 1110	0°C 20100555
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-156	PAGE 1 OF 1
COLLECTOR Elestron / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Field Blank 2	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-09-003	ACTUAL SAMPLE DEPTH 5-7 ft	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	*HCl or H2SO4 to pH <2/Cool*
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGS*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF);

S10V 001584

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D52	WATER	7/20/10	0840	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM BE Elestron BC Elestron	DATE/TIME 7/20/10 1110	RECEIVED BY/STORED IN JD Tuttle	DATE/TIME 7-20-10 @ 1110	0°C 20100555
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-050	PAGE 1 OF 1
COLLECTOR Ekstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I001	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 5'-7'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8015/8260 (TCL) (TF):

S10V001650

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28CL6	OTHER LIQUID	7-20-10	0945	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM BC Ekstrom BC Ekstrom	DATE/TIME 7/20/10 1110	RECEIVED BY/STORED IN TM Cutlock	DATE/TIME 7-20-10 @ 1110
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

20100550

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-223	PAGE 1 OF 1
COLLECTOR Ekstrom/Henry	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 1001	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 5'-7'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SD=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8015/8260 (LOW LEVEL) (TF):	VOA - 8015/8260 (HIGH LEVEL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26CC1	SOIL	7-20-10	0945	✓	✓

S10V001648
S10V001649

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM BC Ekstrom BC Ekstrom	DATE/TIME 7/20/10 1110	RECEIVED BY/STORED IN M Block	DATE/TIME 7-20-10 @ 1110
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

-7°C 20100556

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-222	PAGE 1 OF 2
COLLECTOR Ekstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I001	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 5-7 ft	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Ga jar Liners
		NO. OF CONTAINER(S)	2 AEE 7/20/10
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

S10V001651
S10V001652

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CC0	SOIL	7/20/10	0945	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM BR Ekstrom B C Ekstrom	DATE/TIME 7/20/10 1110	RECEIVED BY/STORED IN TW Gilbert	DATE/TIME 7-20-10 @ 1110	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS 20100556
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-222	PAGE 2 OF 2
COLLECTOR Ekstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I001	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-09-000001	ACTUAL SAMPLE DEPTH 5'-7'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium (Plutonium-238, Plutonium-239/240); Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7676 / I001		
Sampler Initials:	BC/OH	**Date:**	7-20-10
Scale Number:	820-06-06-002	**Cal. Due Date:**	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26CC1	K	N/A	N/A	26.54	32.57	6.03	No Methanol
B26CC1	L	N/A	N/A	26.50	31.83	5.33	No Methanol
B26CC1	M	N/A	N/A	26.20	31.50	5.30	No Methanol
B26CC1	N	N/A	N/A	26.50	31.02	4.52	No Methanol
B26CC1	P	N/A	N/A	26.25	31.12	4.87	No Methanol
B26CC1	W	37.464	37.45	37.85	42.59	4.74	10 ml.
B26CC1	X	37.596	37.57	37.98	42.61	4.63	10 ml.
B26CC1	Y	36.910	36.88	37.28	43.45	6.17	10 ml.
B26CC6	*	37.125	37.12	37.48	N/A	N/A	10 ml.

1. Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

   Sample suffix of W, X, and Y relate to methanol preservation for high level samples.

   Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2. Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3. Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4. Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5. Soil weight is the vial with sample minus Initial Weight.

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-224	PAGE 1 OF 2
COLLECTOR EKstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I002	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001.	ACTUAL SAMPLE DEPTH 7'-9'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Glass Jar/Liners, 8E7 20/10
		NO. OF CONTAINER(S)	81 Liner 1 JAR - shoe material + Liner B material Rec 7/20/10
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CC2	SOIL	7-20-10	1015	✓

S10V001671 (A)
S10V001672 (B) + shoe
~~S10V001673 (C) shoe~~ CR 7/20/10.

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM BC Templeton BC Ekstrom	DATE/TIME 7/20/10 1110	RECEIVED BY/STORED IN RDS Tri Cities Lab	DATE/TIME 7-20-10 @1110	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS 0°C 20100558
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-224	PAGE 2 OF 2
COLLECTOR Ekstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I002	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09-000001	ACTUAL SAMPLE DEPTH 7'-9'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.
(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium (Plutonium-238, Plutonium-239/240); Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 66.0

Date Samples Received: 7-21-10 Group #: 20100556 557 555

Number of Samples: 2 (sets) C-Faam VAdose

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	4°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials [illegible] Date 7-21-10

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-147	PAGE 1 OF 1
COLLECTOR Silstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Trip Blank 3	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ10-000004	ACTUAL SAMPLE DEPTH 10-12 ft	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cooled*
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGr*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28D43	WATER	7/21/10	0845	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM B Elston B Elston	DATE/TIME 7/21/10 1130	RECEIVED BY/STORED IN R Stoglo R Stoglo	DATE/TIME 7.21.10 1130	0V 4 pK GRP# 20100555 SAM# S10V001595
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-157	PAGE 1 OF 1
COLLECTOR Ekstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Field Blank 3	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 10-12ft	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool≤4°C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGr*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28D53	WATER	7/21/10	0908	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Pat Williams BC Ekstrom	DATE/TIME 7/21/10 1130	RECEIVED BY/STORED IN RL Stock RL Stock	DATE/TIME 7.21.10 1130	4°C pk GRP# 20100555 SAM# S10V001585
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-042	PAGE 1 OF 1
COLLECTOR Ekstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 1003	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 10-12 ft	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Glass
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28CL8	OTHER LIQUID	7/21/10	0920	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM RPEdington & CEkstrom	DATE/TIME 7/21/10 1130	RECEIVED BY/STORED IN RPSteele RPSteele	DATE/TIME 7.21.10 1130
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

4°C pks

CRPH 20100556
Sam# S10V001690

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-227	PAGE 1 OF 1
COLLECTOR: Bostrom / Harris	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 8P	DATA TURNAROUND
SAMPLING LOCATION: C7676 1003	PROJECT DESIGNATION: WMA C Sampling for CMS		SAF NO.: V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFV2-10-000004	ACTUAL SAMPLE DEPTH: 10-12 ft	COA: N/A	METHOD OF SHIPMENT: Govt. Vehicle	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1983)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <-7C and >-20C	MEOH/Cool-4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gs*	Gs*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF);	VOA - 5035/8260 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26CC5	SOIL	7/21/10	0920	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Pat Bostrom Bostrom	DATE/TIME: 7/21/10 1130	RECEIVED BY/STORED IN: R Harris @ Steele	DATE/TIME: 7-21-10 1130
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

4°C
-7°C pH

CRP# 20100556
SAM# S10V00 1688
Y 1689

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-226	PAGE 1 OF 2
COLLECTOR Elstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 1003	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 10-12 Ft	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gls Jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CC4	SOIL	7/21/10	0920	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
B.C. Elstrom B.C. Elstrom	7/21/10 1130	R.L. Steele R.L. Steele	7.21.10 1130	4 oz PK
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	GRP# 20100556
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SAM# 510V001691
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	1692
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	1693
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-226	PAGE 2 OF 2
COLLECTOR Ekstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-3589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I003	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 10-12 ft	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

5/10/2010 1:54 PM	WORKING COPY

VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7676 I-003		
Sampler Initials:	BP, DH	Date:	7-21-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-09-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26CC5	K	N/A	N/A	26.44	31.65	5.21	No Methanol
B26CC5	L	N/A	N/A	26.25	30.78	4.53	No Methanol
B26CC5	M	N/A	N/A	26.56	31.18	4.62	No Methanol
B26CC5	N	N/A	N/A	26.60	31.19	4.59	No Methanol
B26CC5	P	N/A	N/A	26.35	31.00	4.65	No Methanol
B26CC5	W	37.513	37.50	37.89	42.14	4.25	10 ml
B26CC5	X	37.030	37.02	37.39	41.88	4.49	10 ml
B26CC5	Y	37.171	37.13	37.54	40.93	3.39	10 ml
B26CL8	*	37.059	37.04	37.43	N/A	N/A	10 ml

1. Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)
   Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.
   Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).
2. Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.
3. Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.
4. Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.
5. Soil weight is the vial with sample minus Initial Weight.

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-158	PAGE 1 OF 1
COLLECTOR Ekstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7576 Field Blank 4	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 14-16ft	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool<6°C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGS*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28D54	WATER	7/21/10	1025	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM PC Ekstrom PC Ekstrom	DATE/TIME 7/21/10 1130	RECEIVED BY/STORED IN [illegible]	DATE/TIME 7-21-10 1130	4°C NK CRL# 20100555 SAM# 510V001586
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-043	PAGE 1 OF 1
COLLECTOR EKSTROM / HARRIS	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I004	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000009	ACTUAL SAMPLE DEPTH 14-16ft	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CL9	OTHER LIQUID	7/21/10	1030	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RL Ekstrom BC Ekstrom	7/21/10 1130	A Harris RL Reed/6	7-21-10 1130
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

4 vials

CRP# 20100556
Sam# S10V001710

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-229	PAGE 1 OF 1
COLLECTOR Elstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 ID04	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 14-16ft	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool 4-7C and >-20C	MEOH/Cool>4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gl*	Gl*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8240 (LOW LEVEL) (TF);	VOA - 5035/8240 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B28CC7	SOIL	7/21/10	1630	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM BE Skotten BC Elstrom	DATE/TIME 7/21/10 1130	RECEIVED BY/STORED IN RE Steele	DATE/TIME 7.21.10 1130
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

4.00 ↗ PS

GRA# 20100556
SM# S10V00 1708
Y 1709

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-228	PAGE 1 OF 2
COLLECTOR: Elestrom/Harris	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 8P	DATA TURNAROUND: 75 Days / 75 Days
SAMPLING LOCATION: C7576 I004	PROJECT DESIGNATION: WMA C Sampling for CMS		SAF NO.: V10-003	AIR QUALITY: ☐	
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFVZ-10-000004	ACTUAL SAMPLE DEPTH: 14-16 Ft	COA: N/A	METHOD OF SHIPMENT: Govt. Vehicle	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs jar/Liners
		NO. OF CONTAINER(S)	2 7/21/10 Liners A & B.
		VOLUME	180g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CC8	SOIL	7/21/10	1030	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: RL Templeton RL Elestrom	DATE/TIME: 7/21/10 1130	RECEIVED BY/STORED IN: RLSteele RLSteele	DATE/TIME: 7-21-10 1130	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS 4°C RK CAP # 20100556 SAM # 510V00 1711 - A Y 1712 - B
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-228	PAGE 2 OF 2
COLLECTOR Elstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I004	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TPVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 14-16 Ft	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

5/10/2010 1:54 PM	WORKING COPY

VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	0-7676 / I004		
Sampler Initials:	BE, OH	**Date:**	7-21-10
Scale Number:	820-66-06-002	**Cal. Due Date:**	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26CC7	K	N/A	N/A	26.29	31.71	5.42	No Methanol
B26CC7	L	N/A	N/A	26.28	31.04	4.76	No Methanol
B26CC7	M	N/A	N/A	26.38	32.21	5.83	No Methanol
B26CC7	N	N/A	N/A	26.29	30.61	4.32	No Methanol
B26CC7	P	N/A	N/A	26.46	30.53	4.07	No Methanol
B26CC7	W	37.908	37.40	37.77	42.83	5.06	10 ml.
B26CC7	X	37.124	37.08	37.47	41.68	4.21	10 ml.
B26CC7	Y	37.311	37.26	37.64	41.99	4.30	10 ml.
~~B26CC7~~	~~Cool 2-0~~						
B26CC9	*	36.900	36.87	37.28	N/A	N/A	10 ml.

1. Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

   Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

   Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2. Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3. Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4. Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5. Soil weight is the vial with sample minus Initial Weight.

VADOSE ZONE
CHARACTERIZATION CHANGE NOTICE

Document: RPP-PLAN-40564 Rev 2 **Change Number:** WMAC-0011 **ECN to TSAP Required?** Y / N

Requestor: Andrew M. Templeton **Date:** 7-27-10

Original Requirement: At each sample depth, three (3) liner samples and one (1) shoe sample are targeted to be taken. Good recovery is required to perform all of the requested analyses.

Samples Impacted: Samples collected in C Farm at site E, location 7676, 14-16 ft. bgs.

Proposed Change:

Due to poor sample recovery from the 14-16 ft. bgs (100% in shoe, 100% in Liner A, 40% in Liner B and 0% in Liner C), an additional sample was collected from 16-18 ft. bgs. (100% in shoe, 100% in Liner A, 100% in Liner B and 20% in Liner C)

To ensure that we have enough material to do all the analyses, a composite will be prepared from Liner A and Liner B at the 14-16 ft. bgs interval, and the shoe, Liner A, Liner B and Liner C at the 16-18 ft. bgs interval.

The samples for volatile organic compound (VOC) analysis were collected from the shoe at the 14-16 ft.. bgs interval.

Reason for Change: Poor sample recovery.

Date Change Effective: 7-22-10

Schedule Impact: None

Authorization:

Vadose Zone POC (Print/Sign): A.M. Templeton **Date:**

Vadose Zone Quality Assurance (Print/Sign): K.J. Dunbar **Date:**

222-S Project Coordinator (Print/Sign): S.G. Mckinney **Date:**

ATL Project Coordinator (Print/Sign): G.P. Ritenour **Date:**

Other (Optional, Print/Sign): **Date:**

cc: S. J. Eberlein, K. M. Hall, Dana Stewart, Dave Myers, Penny Berlin, Eric Wyse, Mike Connelly, Harold Sydnor, Cindy Tabor

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 66.0

Date Samples Received: 7.22.10 Group #: 20100556

Number of Samples: 2 sets C-Fiber VADOSE

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete	✓		on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	2°C / 4°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? Yes PM Initials RA Date 7.22.10

If No, comment on communication and resolution: for TR

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-148	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Trip Blank 4	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 16-18	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cooled*
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D44	WATER	7-22-10	0855	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Berlin Dan Berlin	DATE/TIME 7-22-10 1130	RECEIVED BY/STORED IN RTSteele	DATE/TIME 7-22-10 1130	2°C pK GRH 20100555 SAMP 510V001526
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSES REQUEST			V10-003-230	PAGE 1 OF 2
COLLECTOR: Campbell / Harris	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: SP	DATA TURNAROUND: 75 Days / 75 Days
SAMPLING LOCATION: C7676 I005	PROJECT DESIGNATION: WMA C Sampling for CMS		SAF NO.: V10-003	AIR QUALITY: ☐	
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFVZ-10-000004	ACTUAL SAMPLE DEPTH: 16-18	COA: N/A	METHOD OF SHIPMENT: Govt. Vehicle	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gl jar/Liners
		NO. OF CONTAINER(S)	3 4 7-22-10
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CC8	SOIL	7-22-10	0920	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: Dan Harris Dan Harris	DATE/TIME: 7-22-10 1130	RECEIVED BY/STORED IN: RJSteele RJSteele	DATE/TIME: 7.22.10 1130	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS • V 2 ✓
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	GRP # 20100556 SAM # S10V00 1740 Shoe 1741 Linear B 1742 C 1743
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-290	PAGE 2 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I005	PROJECT DESIGNATION WMA C Sampling for CHS		SAF NO. V10-003		
ICE CHEST NO. BC-22-10 TFVZS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 16-18	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-159	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Field Blank 5	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 38-40	COA n/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cooled*
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D55	WATER	7-22-10	1000	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2°C NK GRP # 20100555 SAF # 510V001587
Dawkins Dawkins	7-22-10 1150	RJ Steele RJ Steele	7.22.10 1130	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-04S	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 1006	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 38-40	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CM1	OTHER LIQUID	7-22-10	1035	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris Dan Harris	7-22-10 1130	RAStede RAStede	7-22-10 1130
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

GRP # 20100556
SAM # 510V001760

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-233	PAGE 1 OF 1
COLLECTOR: Campbell / Harris	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: SP	DATA TURNAROUND: 75 Days / 75 Days
SAMPLING LOCATION: C7676 I006	PROJECT DESIGNATION: WMA C Sampling for CMS		SAF NO.: V10-003	AIR QUALITY: ☐	
ICE CHEST NO.: TFUS-09-003	FIELD LOGBOOK NO.: TFUZ-10-000004	ACTUAL SAMPLE DEPTH: 38'-40'	COA: N/A	METHOD OF SHIPMENT: Govt. Vehicle	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <-7C and >-30C	MEOH/Cool~4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gs*	Gs*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF):	VOA - 5035/8260 (HIGH LEVEL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26CD1	SOIL	7-22-10	1030	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Dan Harris Dan Harris	DATE/TIME: 7-22-10 1130	RECEIVED BY/STORED IN: Richard R Steele	DATE/TIME: 7-22-10 1130
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

2/2 oz / 1 pt

GRP# 20100556
Sam# 510V00 1758
Y 1759

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-232	PAGE 1 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 ID06	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 38-40	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CD0	SOIL	7-22-10	1035	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris	DATE/TIME 7-22-10 1130	RECEIVED BY/STORED IN RHStoele RHStoele	DATE/TIME 7-22-10 1130	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS • V ✓ RB GRPH 20100556 SAMP# S10V001761 A 1762 B 1763 C
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-232	PAGE 2 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I006	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVZ-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 38-40	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO PC 7-22-10 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

5/10/2010 1:54 PM	WORKING COPY

VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-1616/I006		
Sampler Initials:	BC, DH	Date:	7-22-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26CD1	K	N/A	N/A	26.40	31.59	5.19	No Methanol
B26CD1	L	N/A	N/A	26.48	32.00	5.52	No Methanol
B26CD1	M	N/A	N/A	26.31	31.85	5.54	No Methanol
B26CD1	N	N/A	N/A	26.43	31.56	5.13	No Methanol
B26CD1	P	N/A	N/A	26.38	31.16	4.78	No Methanol
B26CD1	W	37.095	37.06	37.43	43.69	6.26	10 ml.
B26CD1	X	37.478	37.44	37.80	43.28	5.48	10 ml.
B26CD1	Y	37.176	37.10	37.50	44.27	6.77	10 ml.
B26CM1	*	37.141	37.10	37.50	N/A	N/A	10 ml.

1. Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)
   Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.
   Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).
2. Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.
3. Initial weight is to include all labels, stickers, bags, methanol (for vender filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.
4. Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.
5. Soil weight is the vial with sample minus Initial Weight.

Type	Document No.	Rev/Mod	Release Date	Page
CONTINUOUS	TO-080-901	A-3	05/10/2010	18 of 18

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 6.6.0

Date Samples Received: 7.27.10 Group #: 20100556 Y 555

Number of Samples: (1 set) C-FARM VADOSE (F007)

Sample Custodian: R Hand

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on File
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	2°C / 8°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling	✓		
• Sampling location or origin	✓		
• Container type, size, and number	✓		
• Analysis request is clear	✓		
• Signature of persons relinquishing and receiving samples	✓		
• Date and/or time of sample custody exchange	✓		
Verify that sample numbers on containers match the COC and/or RSA	✓		
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? Y OS PM Initials RA Date 7.27.10

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-149	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Trip Blank 5	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. BC 7-22-10 TFVS-09-00003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH ~~38-40~~ BC 7-22-10 128-130	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool<C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGr*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (17)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D45	WATER	BC 7-22-10 7-22-10 27	BC 7-22-10 ~~1000~~ 0820	✓

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM — DATE/TIME Dan Harris Dan Harris 7-22-10 1050	RECEIVED BY/STORED IN — DATE/TIME RA Elliott RA Elliott 7.22.10 1050	2°C/RA CAP # 20100555 SAM # S10V00 1597
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-100	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AH	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Field Blank 6	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 128-130	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2 (Cooled)
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGa*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	[illegible]
B26D56	WATER	7-27-10	0845	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Aaron DenHartog	DATE/TIME 7-27-10 1050	RECEIVED BY/STORED IN R.L. Steele	DATE/TIME 7.27.10 1050	2°C pH GRP # 20100555 Sam # S10V00 1588
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-046	PAGE 1 OF 1
COLLECTOR: Campbell / Harris	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 9P	DATA TURNAROUND
SAMPLING LOCATION: C7676 1007	PROJECT DESIGNATION: WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO.: V10-012	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFV2-10-000004	ACTUAL SAMPLE DEPTH: 128-130	COA: u/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: u/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gr*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8015/8260 (TCL) (TT)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28CM2	OTHER LIQUID	7-27-10	0950	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Campbell, Harris, Dan Arnold	DATE/TIME: 7-27-10 1050	RECEIVED BY/STORED IN: Richard R. Steele	DATE/TIME: 7-27-10 1050
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

2 oz / NS

GRP# 20100556

SAM# S10V00 1780

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-235	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I007	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 128-190	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gr*	Gr*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA-5035/8260 (LOW LEVEL) (TP);	VOA-5035/8260 (HIGH LEVEL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26CD3	SOIL	7-27-10	0950	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Catherine Dawkins	7-27-10 1050	Richard R Steele	7-27-10 1050
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

2 oz -80°C
Cert# 20100556
Sm# 510V00 1778
Y 1779

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-234	PAGE 1 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 1007	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 128-130	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Ga Jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CD2	SOIL	7-27-10	0950	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
[illegible] 7-27-10	1050	[illegible] 7/27/10	1050	GRP# Z0100556 Sam# S10V00 1781 1782 1783
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-234	PAGE 2 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 1007	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV5-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 125-130	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

5/10/2010 1:54 PM	WORKING COPY

VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7676 / I007		
Sampler Initials:	DH / BC	Date:	7-27-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26CD3	K	N/A	N/A	26.37	30.61	4.24	No Methanol
B26CD3	L	N/A	N/A	26.28	29.07	2.79	No Methanol
B26CD3	M	N/A	N/A	26.33	28.19	1.86	No Methanol
B26CD3	N	N/A	N/A	26.32	30.60	4.28	No Methanol
B26CD3	P	N/A	N/A	26.33	29.57	3.24	No Methanol
B26CD3	W	37.429	37.36	37.73	42.13	4.40	10 ml.
B26CD3	X	37.203	37.12	37.51	41.46	3.95	10 ml.
B26CD3	Y	37.206	37.15	37.55	41.37	3.82	10 ml.
B26CM2	*	37.174	37.08	37.47	N/A	N/A	10 ml.

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

Type	Document No.	Rev/Mod	Release Date	Page
CONTINUOUS	TO-080-901	A-3	05/10/2010	18 of 18

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev E.E. 0

Date Samples Received: 7-29-10 Group #: 20100556 Y 555

Number of Samples: (1 set) C-Farm VADOSE

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	0.6 / 3.6		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling	✓		
• Sampling location or origin	✓		
• Container type, size, and number	✓		
• Analysis request is clear	✓		
• Signature of persons relinquishing and receiving samples	✓		
• Date and/or time of sample custody exchange	✓		
Verify that sample numbers on containers match the COC and/or RSA	✓		
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials [illegible] Date 7-29-10

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-150	PAGE 1 OF 1
COLLECTOR: Campbell / Harris	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 7P	DATA TURNAROUND
SAMPLING LOCATION: C7676 Trip Blank 6	PROJECT DESIGNATION: WMA C Sampling for CMS - QC Sampling		SAF NO.: V10-002	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFVZ-10-000004	ACTUAL SAMPLE DEPTH	COA: N/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	HCl or H2SO4 to pH <2 (Cyanide)
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	VOA*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26D46	WATER	7-29-10	0700	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: Dan Harris, Dan Harris	DATE/TIME: 7-29-10 1030	RECEIVED BY/STORED IN: Ellen Estrada, Ellen Estrada	DATE/TIME: 7-29-10 1030	°C / pH
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	GRPH 20100555
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	Sam # S10V001598
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-161	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 Field Blank 7	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 157-159	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cooled*
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TT)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28D57	WATER	7-29-10	0815	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM [signature] 7-29-10	DATE/TIME 1030	RECEIVED BY/STORED IN [signature] RSTech16 7.29.10	DATE/TIME 1030	0°C / RS Cap # 20100555 Sam # 510V001589
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-047	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I008	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-09 10 7-29-10 00004	ACTUAL SAMPLE DEPTH 157 - 159	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (WF)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CM3	OTHER LIQUID	7-29-10	0935	✓

7-29-10

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chris Harris Chris Harris	7-29-10 1030	[illegible]	7.29.10 1030
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

GRP# 20100556
Sam# 510U001800

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-237	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7676 I008	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-00004	ACTUAL SAMPLE DEPTH 157-159	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF):	VOA - 5035/8260 (~HIGH LEVEL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B28CD5	SOIL	7-29-10	0935	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris	7-29-10 1030	RASTOOLE	7-29-10 1030
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

0.V
0.V
8 NG

Cert # 20100556
Samp # S10V00.1798
Y 1799

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-236	PAGE 1 OF 2
COLLECTOR Campbell / Harris 7-29-10	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP	DATA TURNAROUND
SAMPLING LOCATION C7676 I008	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 157-159	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CD4	SOIL	7-29-10	0935	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Dexter Dewhurst	7-29-10 1050	[illegible]	7-29-10 1050	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

OV
O/K

GRP # 20100556
Sam # 510U001801
1802
1803

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-236	PAGE 2 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P	DATA TURNAROUND
SAMPLING LOCATION C7676 1008	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO. 5 TFVZ-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 157 – 159	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO AL 7-29-10 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); . 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7676/I008		
Sampler Initials:	BC/DH	Date:	7-29-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26CD5	K	N/A	N/A	26.35	29.65	3.30	No Methanol
B26CD5	L	N/A	N/A	26.36	29.59	3.23	No Methanol
B26CD5	M	N/A	N/A	26.35	29.85	3.50	No Methanol
B26CD5	N	N/A	N/A	26.28	29.75	3.47	No Methanol
B26CD5	P	N/A	N/A	26.31	29.90	3.59	No Methanol
B26CD5	W	37.242	37.16	37.54	41.39	3.85	10 ml.
B26CD5	X	37.110	37.02	37.41	41.27	3.86	10 ml.
B26CD5	Y	36.587	36.48	36.87	40.61	3.74	10 ml.
~~B26CD5~~	Void 7-29-10						
B26CM3	*	37.002	36.88	37.29	N/A	N/A	10 ml.

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/-0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev GG.0

Date Samples Received: 8.17.10 Group #: 20100584, 583 660, 657

Number of Samples: 2 (sets) GVADOSE

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	0°C / 1°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition			If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials VPR Date 8-17-2010

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-085	PAGE 1 OF 1
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Trip Blank 1	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool≤6°C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CX1	WATER	8/17/10	0855	✓

S10V002251

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM BC Ekstrom	DATE/TIME 8/17/10 1100	RECEIVED BY/STORED IN RTSteele	DATE/TIME 8.17.10 1100	0°C 2225-20100657
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-095	PAGE 1 OF 1
COLLECTOR: Ekstrom / Campbell	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 7P	DATA TURNAROUND
SAMPLING LOCATION: C7682 Field Blank 1	PROJECT DESIGNATION: WMA C Sampling for CMS - QC Sampling		SAF NO.: V10-002	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFV2-10-000004	ACTUAL SAMPLE DEPTH: Surface	COA: N/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	HCl or H2SO4 to pH <2/Cooled<C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGlass
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CY1	WATER	8/17/10	0930	✓

S10V002241

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: RE Ekstrom RC Ekstrom	DATE/TIME: 8/17/10 1100	RECEIVED BY/STORED IN: RA Steele RA Steele	DATE/TIME: 8.17.10 1100	0°C / pH
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2225-20100657
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-089	PAGE 1 OF 1
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Surface	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA-5035/8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CM9	OTHER LIQUID	8/17/10	0930	✓

S0V00 2275 - MB

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM R.E. Ekstrom	DATE/TIME 8/17/10 1100	RECEIVED BY/STORED IN R.L. Steele	DATE/TIME 8.17.10 1100
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

0°C/RK

2225-20100660

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-260	PAGE 1 OF 1
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5599	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Surface	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gl*	Gl*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260/5260 (LOW LEVEL) (TF);	VOA - 8260/5260 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26JM0	SOIL	8/17/10	0930	✓	✓

S10V002273 - Low
S10V002274 - High

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM [illegible] [illegible]	DATE/TIME 8/17/10 1100	RECEIVED BY/STORED IN R L Steele R L Steele	DATE/TIME 8.17.10 1100
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, and 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

0°C / RS 0°C / RK

2225-20100660

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME	

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-259	PAGE 1 OF 2
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Surface	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	G/P
		NO. OF CONTAINER(S)	1
		VOLUME	500mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26JL0	SOIL	8/17/10	0930	✓

S10V002280

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM BCEkstrom	DATE/TIME 8/17/10 1100	RECEIVED BY/STORED IN RASteele	DATE/TIME 8.17.10 1100	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS 2225-20100660
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-083-259	PAGE 2 OF 2
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Surface	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C 7682 Surface		
Sampler Initials:	BC / BE	Date:	8-17-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-09-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26JM0	K	N/A	N/A	26.22	31.73	5.51	No Methanol
B26JM0	L	N/A	N/A	26.29	32.00	5.71	No Methanol
B26JM0	M	N/A	N/A	26.36	31.91	5.55	No Methanol
B26JM0	N	N/A	N/A	26.37	31.93	5.56	No Methanol
B26JM0	P	N/A	N/A	26.44	32.08	5.64	No Methanol
B26JM0	W	37.173	37.01	37.40	43.05	5.65	10 ml
B26JM0	X	36.861	36.69	37.06	42.63	5.57	10 ml
B26JM0	Y	37.262	37.11	37.49	42.70	5.21	10 ml
B26CM9	*	37.761	37.64	37.99	N/A	N/A	10 ml

1. Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)
   Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.
   Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).
2. Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.
3. Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.
4. Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.
5. Soil weight is the vial with sample minus Initial Weight.

Type	Document No.	Rev/Mod	Release Date	Page
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Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-096	PAGE 1 OF 1
COLLECTOR Ekstrom/Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Field Blank 2	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH Surface Dip	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool<6C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	8Gr*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CY2	WATER	8/17/10	0930	✓

S10V002242

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM RE Ehm, BC Ekstrom	DATE/TIME 8/17/10 1100	RECEIVED BY/STORED IN Richard R Steele	DATE/TIME 8.17.10 1100	0°C RE 2229 - 20100657
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-060	PAGE 1 OF 1
COLLECTOR Elstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH Surface Dup	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gl*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CN0	OTHER LIQUID	8/17/10	0930	✓

S10V002308 MB

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM PR Elstrom BC Elstrom	DATE/TIME 8/17/10 1100	RECEIVED BY/STORED IN RA Steele	DATE/TIME 8-17-10 1100
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

O'U/RA 2225-20100660

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-262	PAGE 1 OF 1
COLLECTOR: Ekstrom / Campbell	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 8P	DATA TURNAROUND
SAMPLING LOCATION: C7682 Surface Dup	PROJECT DESIGNATION: WMA C Sampling for CMS		SAF NO.: V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFVZ-10-00000 4	ACTUAL SAMPLE DEPTH: Surface Dup	COA: N/A	METHOD OF SHIPMENT: Govt. Vehicle	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gr*	Gr*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF):	VOA - 5035/8260 (HIGH LEVEL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26JM1	SOIL	8/17/10	0930	✓	✓

S10V002306 - Low
S10V002307 - High

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: B Ekstrom / L Ekstrom	DATE/TIME: 8/17/10 1100	RECEIVED BY/STORED IN: RK Keele	DATE/TIME: 8.17.10 1100
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, and 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

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2225 - 20100600

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-261	PAGE 1 OF 2
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	RETURN SAMPLE DEPTH Surface Dup	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	G/P
		NO. OF CONTAINER(S)	1
		VOLUME	500mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	✓
B28JL1	SOIL	8/17/10	0930	✓

S10V002309

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-261	PAGE 2 OF 2
COLLECTOR Ekstrom / Campbell	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH Surface Dup	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C7682 Surface Dup		
Sampler Initials:	BC/BE	Date:	8-17-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-09-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26JM1	K	N/A	N/A	26.37	32.19	5.82	No Methanol
B26JM1	L	N/A	N/A	26.47	32.14	5.67	No Methanol
B26JM1	M	N/A	N/A	26.44	32.21	5.77	No Methanol
B26JM1	N	N/A	N/A	26.33	32.20	5.87	No Methanol
B26JM1	P	N/A	N/A	26.37	32.10	5.73	No Methanol
B26JM1	W	37.317	37.26	37.63	43.28	5.65	10 ml
B26JM1	X	37.175	37.11	37.50	42.90	5.40	10 ml
B26JM1	Y	37.207	37.15	37.55	43.21	5.66	10 ml
B26CN0	*	37.772	37.79	38.08	N/A	N/A	10 ml

1. Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

   Sample suffix of W, X, and Y relate to methanol preservation for high level samples.

   Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2. Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3. Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4. Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5. Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 66.0

Date Samples Received: 8.18.10 Group #: 20100660
Number of Samples: 3 sets C-Farm VADOSE 20100657
Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete	✓		on file
Check that outer custody seal is intact, if present			
Record cooler temperature in centigrade, as appropriate	~~NA~~ / ~~4~~ °C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition			If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials [illegible] Date 8-18-10
If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-086	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Trip Blank 2	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 5' to 7'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cooled C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water Wi=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CX2	WATER	8-18-10	0845	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
[illegible] 8-18-10	1200	[illegible] RHSteele	8.18.10 1200	CFP # 20100657 Sm # 510V002252
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-097	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P	DATA TURNAROUND
SAMPLING LOCATION C7682 Field Blank 3	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 5' to 7'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water Wi=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	HCl or H2SO4 to pH <2/Cooled<C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CY3	WATER	8-18-10	0925	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	GRP # 20100657 SMP # S10V002243
Dan Harris Dan Harris 8-18-10	1200	R Steele R Steele	8-18-10 1200	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-001	PAGE 1 OF 1
COLLECTOR Harry / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 ID01	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-005	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 5-7'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Glass
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CF1	OTHER LIQUID	8-18-10	0900	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	8-18-10 1200	RHSteele	8-18-10 1200
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

-10°C
PK

CRP# 20100660
SAM# 510V00 2330

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-160	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AN	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P	DATA TURNAROUND
SAMPLING LOCATION C7682 1001	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 5'-7'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gs*	Gs*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TP);	VOA - 5035/8260 (HIGH LEVEL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C48	SOIL	8-18-10	0900	/	/

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	8-18-10 1200	RLSteele RLSteele	8-18-10 1200
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

-1°C
-4°C NA

GRP# 20100660
Sam# S10V002327
2329

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-199	PAGE 1 OF 2
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 1001	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 5'-7'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs Jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (L) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C47	SOIL	8-18-10	0900	/

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Quentin Dean Harris 8-18-10	DATE/TIME 1200	RECEIVED BY/STORED IN Richard Ristecle	DATE/TIME 8-18-10 1200
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

-10/pk

GRP# 20100660

SAM# 510V002333 ~~2335~~ 2335

2336

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-159	PAGE 2 OF 2
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I001	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 5'-7'	COA n/a	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7182 I 001		
Sampler Initials:	SRS	Date:	8-18-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-09-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C48	K	N/A	N/A	26.30	32.17	5.87	No Methanol
B26C48	L	N/A	N/A	26.34	32.16	5.82	No Methanol
B26C48	M	N/A	N/A	26.32	32.12	5.80	No Methanol
B26C48	N	N/A	N/A	26.53	32.16	5.63	No Methanol
B26C48	P	N/A	N/A	26.50	32.44	5.94	No Methanol
B26C48	W	37.187	37.13	37.56	42.86	5.30	10ml
B26C48	X	37.415	37.31	37.71	43.60	5.89	10 ml
B26C48	Y	37.064	37.03	37.37	42.64	5.27	10ml
B26CF1	*	36.721	36.66	37.02	N/A	N/A	10ml

1. Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)
   Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.
   Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).
2. Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.
3. Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.
4. Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.
5. Soil weight is the vial with sample minus Initial Weight.

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-098	PAGE 1 OF 1
COLLECTOR Harris/ Snook	COMPANY CONTACT TEMPLETON; AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Field Blank 4	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFUS-09-063	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 10'-12'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2 (Cool <4°C)
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CY4	WATER	8-18-10	1030	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Adams Dan Harris	DATE/TIME 8-18-10 1200	RECEIVED BY/STORED IN RHSteele	DATE/TIME 8-18-10 1200	1/RK Grp# 20100657 Smp# 510V002244
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-002	PAGE 1 OF 1
COLLECTOR Hurds / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 1002	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVL-10-000004	ACTUAL SAMPLE DEPTH 10'-12'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gr*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA-5035/8260 (TCL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CF2	OTHER LIQUID	8-18-10	1015	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	8-18-10 1200	[signature] R L STEGLE	8-18-10 1200
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

-100/PC

GRP # 20100660
SAM # S10V00 ~~2366~~ 2361

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-162	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I002	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 10'-12'	COA n/a	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/a		BILL OF LADING/AIR BILL NO. n/a		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TP):	VOA - 5035/8260 (HIGH LEVEL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C50	SOIL	8-18-10	1015	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris Dan Harris	8-18-10 1200	RHSteele	8-18-10 1200
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.

** The laboratory is to use one of the low level VOA bottles for moisture content determination.

** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

-1 L
RS 0 V
-4 P

GRP# 20100660
Sam# S10V 2358 related
Y ~~2359~~ 2360

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

ST

1015

SAMPLE RECORD SHEET

Location:		C7682 I002					
Sampler Initials:		SAS			**Date:**	8-18-10	
Scale Number:		820-66-06-002			**Cal. Due Date:**	11-09-10	
Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weight (grams)[5]	Methanol in sample bottle (ml)
B26C50	K	N/A	N/A	25.87	30.81	4.94	No Methanol
B26C50	L	N/A	N/A	26.23	31.70	5.47	No Methanol
B26C50	M	N/A	N/A	26.29	31.96	5.67	No Methanol
B26C50	N	N/A	N/A	26.16	31.60	5.44	No Methanol
B26C50	P	N/A	N/A	26.15	30.92	4.77	No Methanol
B26C50	W	37.137	37.11	37.45	42.56	5.11	10ml
B26C50	X	36.954	36.92	37.26	42.28	5.02	10ml
B26C50	Y	36.629	36.59	36.91	42.17	5.26	10ml
B26CF2	*	37.133	37.09	37.43	N/A	N/A	10ml

1. Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

   Sample suffix of W, X, and Y relate to methanol preservation for high level samples.

   Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2. Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3. Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4. Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5. Soil weight is the vial with sample minus Initial Weight.

Type	Document No.	Rev/Mod	Release Date	Page
CONTINUOUS	TO-080-901	A-3	05/10/2010	18 of 18

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-163	PAGE 1 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I003	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 12' to 14'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs Jar/Liners
		NO. OF CONTAINER(S)	14 3 Lines A,B,C 1 Shoc Sound Rt Lt
		VOLUME	150g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C51	SOIL	8-18-10	1130	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Jim Aeros Dan Berlin 8-18-10	1200	RtSfeole RtSfeole	8-18-10 1200	-1 oz RK
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	GRP# 20100660
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SAM# 510V 2387
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2388
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2389
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2390
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-163	PAGE 2 OF 2
COLLECTOR Harry Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I003	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 12' - 14'	COA n/a	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/a		BILL OF LADING/AIR BILL NO. n/a		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

pt 8-24-10

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev EG.0

Date Samples Received: 8.19.10 Group #: Q0100660, 657

Number of Samples:

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate (F) (I)	0°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? Yes PM Initials VPR Date 8/19/2010

If No, comment on communication and resolution:

Other Comments:

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-087	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Trip Blank 3	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFU2 - 09- 003	FIELD LOGBOOK NO. TFU2-10-000084	ACTUAL SAMPLE DEPTH 14'-16'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool<4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGe*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CX3	WATER	8-19-10	0830	

S10V002253

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	0 ✓/ 20100657
Dan Harris Dan Harris	8-19-10 1140	RJSteele RJSteele	8.19.10 1140	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-009	PAGE 1 OF 1
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Field Blank 5	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 14' - 16'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool=4°
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CY5	WATER	8-19-10	0845	✓

S10V002245

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Dan Berry, Dan Harris	8-19-10 1140	RJ Steele RJSteele	8-19-10 1140	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	222-20100657
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-004	PAGE 1 OF 1
COLLECTOR Snook / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I004	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 14' to 16'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gl*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TF)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CF4	OTHER LIQUID	9-19-10	0910	✓

S10V002406

CHAIN OF POSSESSION		SIGN/PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Adams Dan Harris	8-19-10 1140	Richard Ritskeile	9-19-10 1140
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

O/RK

~~2226-20100660~~ 9/12/8-19-10

2225-20100660

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-166	PAGE 1 OF 1
COLLECTOR Hooks / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 1004	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-065	FIELD LOGBOOK NO. TFVZ-10-000034	ACTUAL SAMPLE DEPTH 14'-16'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF);	VOA - 5035/8260 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C54	SOIL	8-19-10	0910	✓	✓

SWV002404 ~~High~~ Low DAR 8-19-10
2405 High

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Dan Acevis	DATE/TIME 8-19-10 1140	RECEIVED BY/STORED IN R Steele	DATE/TIME 8-19-10 1140
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.

** The laboratory is to use one of the low level VOA bottles for moisture content determination.

** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

2225-20100660

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-165	PAGE 1 OF 2
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I004	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 14' - 16'	COA n/a	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/a		BILL OF LADING/AIR BILL NO. n/a		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C53	SOIL	8-19-10	0910	—

S10V002407 A
2408 B
2409 C

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Deshawn DeHarris 8-19-10	1140	R.L. Steele	8.19.10 1140	0/pk
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	222S-20100660
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-165	PAGE 2 OF 2
COLLECTOR Hooks / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE BP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 ID04	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-005	FIELD LOGBOOK NO. TFVZ-10-000084	ACTUAL SAMPLE DEPTH 14' - 16'	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

5/10/2010 1:54 PM	WORKING COPY

VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

0910

Location:	C7682 I004		
Sampler Initials:	SMS	Date:	8-19-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C54	K	N/A	N/A	26.36	30.90	4.54	No Methanol
B26C54	L	N/A	N/A	26.16	30.40	4.24	No Methanol
B26C54	M	N/A	N/A	25.97	30.80	4.83	No Methanol
B26C54	N	N/A	N/A	26.22	30.95	4.73	No Methanol
B26C54	P	N/A	N/A	26.18	28.64	2.46	No Methanol
B26C54	W	37.821	37.72	38.08	41.95	3.87	10ml
B26C54	X	37.163	37.06	37.48	43.05	5.57	10ml
B26C54	Y	37.143	37.06	37.45	42.60	5.15	10ml
B26CF4	*	37.535	37.45	37.82	N/A	N/A	10ml

1. Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)
   Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.
   Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).
2. Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.
3. Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.
4. Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.
5. Soil weight is the vial with sample minus Initial Weight.

Type	Document No.	Rev/Mod	Release Date	Page
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Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-100	PAGE 1 OF 1
COLLECTOR Harris/Sucok	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Field Blank 6	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFV3-09-005	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 18' - 20'	COA n/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool≤6°C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGa*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CY6	WATER	8-19-10	1065	✓

S10V002246

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Harris, Dan Harris	DATE/TIME 8-19-10 1140	RECEIVED BY/STORED IN RT Steele RTSteele	DATE/TIME 8-19-10 1140	0/0 222-S-20100657
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-005	PAGE 1 OF 1
COLLECTOR: Harris / Smock	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 9P	DATA TURNAROUND
SAMPLING LOCATION: C7682 1005	PROJECT DESIGNATION: WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO.: V10-012	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFVZ-10-000004	ACTUAL SAMPLE DEPTH: 18' - 20'	COA: N/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gl*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TF)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CF5	OTHER LIQUID	8-19-10	1030	✓

S10V002425

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris	8-19-10 1140	R.L. Ted Reeds	8.19.10 1140
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

O/RS

2225-20100660

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-168	PAGE 1 OF 1
COLLECTOR: Harris / Snook	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 8P	DATA TURNAROUND
SAMPLING LOCATION: C7682 I005	PROJECT DESIGNATION: WMA C Sampling for CMS		SAF NO.: V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFVZ-10-000004	ACTUAL SAMPLE DEPTH: 18' - 20'	COA: N/A	METHOD OF SHIPMENT: Govt. Vehicle	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <-7C and >-20C	MEDH/Cool~4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gs*	Gs*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF);	VOA - 5035/8260 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B28C56	SOIL	8-19-10	1030	—	—

S10V002423 ~~High~~ Low
2424 ~~Low~~ High

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Dustin Dunkerson 8-19-10	DATE/TIME: 1140	RECEIVED BY/STORED IN: R Steele 8.19.10	DATE/TIME: 1146
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

7°C
0°C
2225-20100660

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-083-167	PAGE 1 OF 2
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE BP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I005	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS- 09-005	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 18'- 20'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Glass Jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	150g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28C55	SOIL	8-19-10	1030	✓

S10V00 2426-A
2427 B
2428 C

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris	DATE/TIME 8-19-10 1140	RECEIVED BY/STORED IN R.B. Steele R.B. Steele	DATE/TIME 8-19-10 1140	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS O/RK
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2225-20100660
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-167	PAGE 2 OF 2
COLLECTOR Hawk/ Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I005	PROJECT DESIGNATION WNA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV3-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 18'-20'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

5/10/2010 1:54 PM	WORKING COPY

VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

1030

SAMPLE RECORD SHEET

Location:	C7682 I005		
Sampler Initials:	SJS	Date:	8-19-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C56	K	N/A	N/A	26.22	31.49	5.27	No Methanol
B26C56	L	N/A	N/A	26.17	31.06	4.89	No Methanol
B26C56	M	N/A	N/A	26.09	30.98	4.89	No Methanol
B26C56	N	N/A	N/A	25.93	30.94	5.01	No Methanol
B26C56	P	N/A	N/A	26.30	31.20	4.90	No Methanol
B26C56	W	36.864	36.80	37.18	42.97	5.79	10 ml
B26C56	X	36.418	36.38	36.73	41.82	5.09	10 ml
B26C56	Y	37.037	36.98	37.35	42.41	5.06	10 ml
B26CFS	*	36.992	36.85	37.29	N/A	N/A	10 ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

Type	Document No.	Rev/Mod	Release Date	Page
CONTINUOUS	TO-080-901	A-3	05/10/2010	18 of 18

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 66.0

Date Samples Received: 8-23-10 Group #: 20100677

Number of Samples: 1(Set) G-FARM Equipment Blank

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete	✓		on hand
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	1°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials DPR Date 8-23-2010

If No, comment on communication and resolution:

Other Comments:

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	V10-002-165	PAGE 1 OF 3

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 7P	DATA TURNAROUND
Ekstrom / Harris	TEMPLETON, AM	373-5589	BERLIN, PC	AIR QUALITY ☐	75 Days / 75 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C7682 Equipment Blank	WMA C Sampling for CMS - QC Sampling		V10-002		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
TFVS-09-003	TFV2-10-000004	N/A	N/A	GOVERNMENT VEHICLE	
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
222-S Lab Operations	N/A		N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool-4C	HCl or H2SO4 to pH <2/Cool-6C	Cool-6C	Cool-4C	Cool-6C	HCl to pH <2/Cool-6C	Cool-6C	Cool-6C	Cool-6C	HNO3 to pH <2
HOLDING TIME	ASAP	14 Days	14 Days	7/40 Days	14/40 Days	14 Days	14 Days	14/40 Days	None	28 Days
TYPE OF CONTAINER	G/P	aGs*	Gs*	aG	aG	aGs*	G/P	aG	aG	G/P
NO. OF CONTAINER(S)	1	3	3	1	1	3	1	2	3	1
VOLUME	500mL	40mL	40mL	1000mL	1000mL	40mL	125mL	1000mL	1000mL	500mL
SAMPLE ANALYSIS	pH (Water) - 9040 (TP); IC Anions - 9056;	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Ethylene glycol - 8015B;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	TPH-Diesel Range - WTPH-D;	TPH-Gasoline Range - WTPH-G;	MBP/DBP - 9096 (modified);	Pesticides - 8081 (TP);	PCBs - 8082;	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B26PF9	WATER	8/23/10	0045	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
				SPV00 2650	2695	2654	2646	2658	2655	2659	2657	2656	2647

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Dan Acuna, Dan Acuna 8-23-10	1110	RE Stegle RE Stegle	8.23.10 1110	SDGs 20100676 – 2225
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	20100677 – Offsite
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-265	PAGE 2 OF 3
COLLECTOR Ekstrom / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Equipment Blank	PROJECT DESIGNATION WMA C Sampling for CHS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH N/A	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

(1) VOA - 8260 (TCL) (TF) {(m+p)-Xylene, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1-Butanol, 2-Butanone, 2-Nitropropane, 4-Methyl-2-pentanone, Acetone, Benzene, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroform, cis-1,2-Dichloroethylene, Diethyl ether, Ethyl acetate, Ethylbenzene, Isobutyl alcohol, Methanol, Methylene chloride, o-Xylene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Trichloromonofluoromethane, Vinyl chloride, Xylenes (total)};
(2) Semi-VOA - 8270 Complete (TF) {1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, 2,4,5-Trichlorophenol, 2,4,6-Trichlorophenol, 2,4-Dinitrotoluene, 2,6-bis(1,1-dimethylethyl)-4-methyl phenol, 2-Chlorophenol, 2-Methylphenol (cresol, o-), 2-Nitrophenol, 3+4 Methylphenol (cresol, m+p), 4-Chloro-3-methylphenol, Acenaphthene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl) phthalate, Butylbenzylphthalate, Cellosolve Solvent, Chrysene, Cyclohexanone, Di-n-butylphthalate, Di-n-octylphthalate, Dibenz[a,h]anthracene, Fluoranthene, Hexachlorobutadiene, Hexachloroethane, Indeno(1,2,3-cd)pyrene, Isobutyl alcohol, n-Nitrosodi-n-dipropylamine, n-Nitrosomorpholine, Naphthalene, Nitrobenzene, Pentachlorophenol, Pyrene, Pyridine, Total cresols, Tributyl phosphate};
(3) Mercury - 7470 - (CV) (TF); ICP Metals - 6010 (SW-846) (TF); RADISO_ICPMS (TF);

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-165	PAGE 3 OF 3
COLLECTOR: Ekstrom / Harris	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 7P	DATA TURNAROUND: 75 Days / 75 Days
SAMPLING LOCATION: C/682 Equipment Blank	PROJECT DESIGNATION: WMA C Sampling for CM5 - QC Sampling		SAF NO.: V10-002	AIR QUALITY ☐	
ICE CHEST NO.: TFV5-09 - 003	FIELD LOGBOOK NO.: TFV2-10-000004	ACTUAL SAMPLE DEPTH	COA: N/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	H2SO4 to pH <2/Cool~6C	ZnAc+NaOH to pH > 9/Cool~6C	NaOH to pH >=12/Cool~4 C	HNO3 to pH <2	None
HOLDING TIME	28 Days	7 Days	14 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	2	1
VOLUME	250mL	500mL	250mL	1000mL	1000mL
SAMPLE ANALYSIS	200.7_AMMONIUM (TF);	Sulfide - 9215;	Total Cyanide - 9014 (TF);	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	C14; H3 - TRITIUM; I129_SEP_GEA (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B26PF9	WATER	8/23/10	0045	✓ 2653	✓ 2651	✓ 2652	✓ 2649	✓ 2648

CHAIN OF POSSESSION	DATE/TIME	SIGN/ PRINT NAMES	DATE/TIME
RELINQUISHED BY/REMOVED FROM: DeHaas DeHaas	8-23-10 1110	RECEIVED BY/STORED IN: R.L. Steele	8-23-10 1110
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN	

SPECIAL INSTRUCTIONS: (4) GAMMA ENERGY ANALYSIS (TF); Americium-241 (TF); CURIUM; Nickel-63 (TF); Selenium-79 (TF); Strontium-89,90 – Sr-90; Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; 10C / RA

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 66.0

Date Samples Received: 8.27.10 Group #: 20100660, 657

Number of Samples: (1 set) G-FAAM VADOSE

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete	✓		on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	6°C / 9°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials MPR Date 8-23-10

If No, comment on communication and resolution:

Other Comments:

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-082-089	PAGE 1 OF 1
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Trip Blank 5	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFUS-09-067	FIELD LOGBOOK NO. TFUZ-10-000084	ACTUAL SAMPLE DEPTH 45'-47'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool=4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CX5	WATER	8-25-10	0845	—

S10V002255

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Adams Dan Harris	DATE/TIME 8-23-10 1115	RECEIVED BY/STORED IN RTSteele	DATE/TIME 8.23.10 1115	6°C/RK 2225-20100657
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-101	PAGE 1 OF 1
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Field Blank 7	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFUS-09-007	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 45' - 47'	COA n/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2(Cool<4C)
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	8Gs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CY7	WATER	8-23-10	0855	—

S10V002247

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dr. Aaron Dan Harris 8-23-10	DATE/TIME 1115	RECEIVED BY/STORED IN RLSteele 8-23-10	DATE/TIME 1115	6 ℃/pk 2225-20100657
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-006	PAGE 1 OF 1
COLLECTOR Snook / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I006	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-~~003~~ 007 SMS 8-23-10	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 45' to 47'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CF6	OTHER LIQUID	8-23-10	1000	—

S10V002444 MB

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** All VOA samples will be collected using EPA Method 5035A.
Dan Harris Dan Harris	8-23-10 1115	R Steele R Steele	8-23-10 1115	** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	6°C/RC
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2225-20100660
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-170	PAGE 1 OF 1
COLLECTOR: Harris / Snook	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: SP	DATA TURNAROUND
SAMPLING LOCATION: C7682 1006	PROJECT DESIGNATION: WMA C Sampling for CMS		SAF NO.: V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO.: TFVS-09-007	FIELD LOGBOOK NO.: TFVZ-10-000004	ACTUAL SAMPLE DEPTH: 45' to 47'	COA: N/A	METHOD OF SHIPMENT: Govt. Vehicle	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gs*	Gs*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 8085/8260 (LOW LEVEL) (TP);	VOA - 8085/8260 (HIGH LEVEL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C58	SOIL	8-23-10	1000	/	/

210V002442 Low
2443 high

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Dan Harris Dan Snook	DATE/TIME: 8-23-10 1115	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 8.23.10 1115
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

60
9-6

2225-20100660

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-169	PAGE 1 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I006	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-007	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 45-47'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C57	SOIL	8-23-10	1000	

510V002445 A
2446 B
2447 C

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Chris Harris Dan Arnold	8-23-10 1115	Richard R Steele	8-23-10 1115	6°C
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2225-20100660
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-160	PAGE 2 OF 2
COLLECTOR Harry/ Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 1006	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFU8- 09-007	FIELD LOGBOOK NO. TFU2- 10-000884	ACTUAL SAMPLE DEPTH 45'- 47'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.
(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C7662 E006		
Sampler Initials:	SAS	**Date:**	23AUG10
Scale Number:	820-66-06-002	**Cal. Due Date:**	11-09-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C58	K	N/A	N/A	26.10	~~31.41~~ 31.81	5.71	No Methanol
B26C58	L	N/A	N/A	26.19	31.92	5.73	No Methanol
B26C58	M	N/A	N/A	25.91	31.11	5.20	No Methanol
B26C58	N	N/A	N/A	26.22	31.16	4.94	No Methanol
B26C58	P	N/A	N/A	26.15	31.83	5.68	No Methanol
B26C58	W	36.888	36.84	37.15	42.26	5.11	10 ml
B26C58	X	37.442	37.37	37.67	41.46	3.79	10 ml
B26C58	Y	36.881	36.80	37.08	41.20	4.12	10 ml
B26C58	*	37.519	37.52	37.78	N/A	N/A	10 ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 6.0

Date Samples Received: 8-24-10 Group #: 20100657 Y 660

Number of Samples: 1 set C-FAN VADOSE

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete	✓		on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	6.0 / 11.0		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling	✓		
• Sampling location or origin	✓		
• Container type, size, and number	✓		
• Analysis request is clear	✓		
• Signature of persons relinquishing and receiving samples	✓		
• Date and/or time of sample custody exchange	✓		
Verify that sample numbers on containers match the COC and/or RSA	✓		
Samples stored properly (e.g. refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? YES PM Initials RK Date 8-24-10

If No, comment on communication and resolution: per G. Ritenour

Other Comments:

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-088	PAGE 1 OF 1
COLLECTOR Dan Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Trip Blank 4	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFV3-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 88' - 90'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool≤4°
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CX4	WATER	8-24-10	0930	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris 8-24-10	DATE/TIME 1130	RECEIVED BY/STORED IN Rfitted RRteele 8-24-10	DATE/TIME 1130	6°C/PK CRP# 20100657 SAM# 510V002254
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-102	PAGE 1 OF 1
COLLECTOR Dan Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Field Blank 8	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 88'-90'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cooled*
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGa*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28CY8	WATER	8-24-10	0935	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris 8-24-10	DATE/TIME 1130	RECEIVED BY/STORED IN RLSteele RLSteele 8-24-10	DATE/TIME 1130	6°C/K GRP # 20100657 SAM # S10V002248 ~~E10002248~~ NLM
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-007	PAGE 1 OF 1
COLLECTOR Dan Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I007	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFUS-09-005	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 88' - 90'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CF7	OTHER LIQUID	8-24-10	1030	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris, Dan Harris	8-24-10 1130	Richard Ritstede	8.24.10 1130
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

GRP# 20100660
STAN# S10V002463

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-172	PAGE 1 OF 1
COLLECTOR Dan Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 1007	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 88'- 90'	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260A(8260 (LOW LEVEL) (TF);	VOA - 8260A(8260 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C60	SOIL	8-24-10	1030	—	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris Dan Harris	8-24-10 1130	RAS RAS Steele	8-24-10 1130
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.

** The laboratory is to use one of the low level VOA bottles for moisture content determination.

** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

GU -11 OL DK

GRP# 20100650
Sam # 510V00 2461
Y 2462

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-171	PAGE 1 OF 2
COLLECTOR Dan Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 ID07	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 88' - 90'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C59	SOIL	8-24-10	1030	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Dan Harris Dan Harris	8-24-10 1130	RLSteele RLSteele	8-24-10 1130	6/pk
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	GRP# 20100660
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SAM# 510U00 2464
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2465
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2466
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-171	PAGE 2 OF 2
COLLECTOR Dan Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I007	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 88' - 90'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C7682I007		
Sampler Initials:	CDA	**Date:**	24AU610
Scale Number:	820-66-06-002	**Cal. Due Date:**	11-09-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C60	K	N/A	N/A	26.20	29.88	3.68	No Methanol
B26C60	L	N/A	N/A	26.24	29.36	3.12	No Methanol
B26C60	M	N/A	N/A	26.00	31.44	5.44	No Methanol
B26C60	N	N/A	N/A	26.15	28.40	2.25	No Methanol
B26C60	P	N/A	N/A	26.07	29.33	3.26	No Methanol
B26C60	W	37.137	37.05	37.37	40.07	2.70	10 ml
B26C60	X	37.579	37.50	37.90	41.06	3.16	10 ml
B26C60	Y	36.899	36.86	37.22	41.45	4.23	10 ml
B26CF1	*	37.010	36.96	37.33	N/A	N/A	10 ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/-0.2 grams of Vendors tare weight of bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

Type	Document No.	Rev/Mod	Release Date	Page
CONTINUOUS	TO-080-901	A-3	05/10/2010	18 of 18

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev EE.0

Date Samples Received: 8-25.10 Group #: 20100660 Y 657

Number of Samples: 1 set C-FARM C7682

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on file
Check that outer custody seal is intact, if present			
Record cooler temperature in centigrade, as appropriate	10.6 / 8.6		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling	✓		
• Sampling location or origin	✓		
• Container type, size, and number	✓		
• Analysis request is clear	✓		
• Signature of persons relinquishing and receiving samples	✓		
• Date and/or time of sample custody exchange	✓		
Verify that sample numbers on containers match the COC and/or RSA	✓		
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials DPR Date 8-25-2010

If No, comment on communication and resolution:

Other Comments:

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-090	PAGE 1 OF 1
COLLECTOR: Harris / Sroek	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 7P	DATA TURNAROUND
SAMPLING LOCATION: C7682 Trip Blank 6	PROJECT DESIGNATION: WMA C Sampling for CMS - QC Sampling		SAF NO.: V10-002	AIR QUALITY: ☐	75 Days / 75 Days
ICE CHEST NO.: TFV5-09-003	FIELD LOGBOOK NO.: TFVZ-10-000004	ACTUAL SAMPLE DEPTH: 122' to 124'	COA: N/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGa*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CX6	WATER	8-25-10	0845	/

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	OV O/
Dan Harris Dan Harris	8-25-10 1105	Robert Obstacle	8-25-10 1105	GRP# 20100657 SAM# 510V002256
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-103	PAGE 1 OF 1
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 Field Blank 9	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFUS-09-005	FIELD LOGBOOK NO. TFUL-10-000084	ACTUAL SAMPLE DEPTH 122' - 124'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Dechlor/C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	wGlf*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TPI)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CY9	WATER	8-25-10	0855	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Dan Harris Dan Harris 8-25-10	1105	RLSteele RLSteele 8.25.10	1105	0°C/pH
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

GRP# 20100657
Sm# 5100002249

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-008	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AH	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I008	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 122' to 124'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CF8	OTHER LIQUID	8-25-10	1005	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris Dan Harris	8-25-10 1105	R.E. Steele R.E. Steele	8-25-10 1105
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

O.U. / RK

Grab # 20100660
Sample # S10V002482

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-174	PAGE 1 OF 1
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5389	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7682 I008	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 122'-124'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gl*	Gl*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8265/8260 (LOW LEVEL) (TF);	VOA - 8265/8260 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B28C82	SOIL	8-25-10	1005	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris Dan Harris	8-25-10 1105	RLS/EGG	8-25-10 1105
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis, and 1 methanol process control sample.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

GRP# 20100660
Sam# S10V00 2480
Y 2481

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-173	PAGE 1 OF 2
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7662 1008	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 122'-124'	COA n/a	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/a		BILL OF LADING/AIR BILL NO. n/a		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs Jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C61	SOIL	8-25-10	1005	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Dan Harris Dan Harris	8-25-10 1105	RtSteele RtSteele	8-25-10 1105	0°C / RS GRP# 20100660 SAM# 510V002483 2484 2485
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-173	PAGE 2 OF 2
COLLECTOR Harris/ Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE BP	DATA TURNAROUND
SAMPLING LOCATION C7682 1008	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO. TFVS-09-005	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 122'-124'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium (Plutonium-238, Plutonium-239/240); Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C7682 I008		
Sampler Initials:	SMS	Date:	8-25-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C62	K	N/A	N/A	26.07	31.15	5.08	No Methanol
B26C62	L	N/A	N/A	26.18	31.43	5.25	No Methanol
B26C62	M	N/A	N/A	26.14	31.10	4.96	No Methanol
B26C62	N	N/A	N/A	26.00	30.38	4.38	No Methanol
B26C62	P	N/A	N/A	25.92	31.00	5.08	No Methanol
B26C62	W	37.800	37.67	38.06	42.88	4.82	10ml
B26C62	X	37.214	37.12	37.49	42.45	4.96	10ml
B26C62	Y	36.914	36.83	37.21	41.87	4.66	10ml
B26CF8	*	37.440	37.36	37.75	N/A	N/A	10ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev C.6.0

Date Samples Received: 8-26-10 Group #:

Number of Samples: 2 sets C-Gram vadose (7680) Surface & DUP

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete		✓	on File
Check that outer custody seal is intact, if present			
Record cooler temperature in centigrade, as appropriate	0°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling	✓		
• Sampling location or origin	✓		
• Container type, size, and number	✓		
• Analysis request is clear	✓		
• Signature of persons relinquishing and receiving samples	✓		
• Date and/or time of sample custody exchange	✓		
Verify that sample numbers on containers match the COC and/or RSA	✓		
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials DPN Date 8-26-10

If No, comment on communication and resolution:

690
692
689
694

Other Comments:

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-065	PAGE 1 OF 1
COLLECTOR Hurst/ Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Trip Blank 1	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFU2-09-005	FIELD LOGBOOK NO. TFU2-10-006604	ACTUAL SAMPLE DEPTH Surface/Subtracting	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool=4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water Wi=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CV1	WATER	8-26-10	0845	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Dan Harris Dan Harris 8-26-10	1620	RtSteele RtSteele 8-26-10	1020	O/U Rte COC 20100583 Seal S10V00 1856
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-075	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Field Blank 1	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH Surface/Deep	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS / REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool≤6°C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28CW2	WATER	8-26-10	0915	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Adams Dan Adams 8-26-10	DATE/TIME 1020	RECEIVED BY/STORED IN R/Steele R/Steele 8.26.10	DATE/TIME 1020	ov O/pk GRID 20100583 Sam # S10V001~~1846~~ etc ~~1854~~ R/Steele 1846 8.26.10
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-057	PAGE 1 OF 1
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Surface	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-10-000064	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gl*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CM7	OTHER LIQUID	8-26-10	0900	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris 8-26-10	DATE/TIME 1020	RECEIVED BY/STORED IN R Steele R Steele 8-26-10	DATE/TIME 1020	** All VOA samples will be collected using EPA Method 5035A. ** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected. °C/RD CRF# 20100584 SAM # 510V001868
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-256	PAGE 1 OF 1
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Surface	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-005	FIELD LOGBOOK NO. TFVZ-10-00008.4	ACTUAL SAMPLE DEPTH Surface	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <-3C and >-20C	MEOH/Cool~4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gr*	Gr*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TP);	VOA - 5035/8260 (HIGH LEVEL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26JL8	SOIL	8-26-10	0900	—	—

CHAIN OF POSSESSION		SIGN/PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris 8-26-10	DATE/TIME 1020	RECEIVED BY/STORED IN R.L. Steele R.L. Steele 8-26-10	DATE/TIME 1020
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, and 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

GRP# 20100584
Sam# 510V00 1866
Y 1867

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-255	PAGE 1 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Surface	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH Surface	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	G/P
		NO. OF CONTAINER(S)	1
		VOLUME	500mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26JK8	SOIL	8-26-10	0900	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Don Arcuo Don Harris	8-26-10 1020	RA Steele RA Steele	8-26-10 1020	OU / pK
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	CRP# 20100584
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	Sam# 510V001869
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-255	PAGE 2 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Surface	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH Surface	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240); Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

5/10/2010 1:54 PM	WORKING COPY

VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

0900

Location:	C-7680 Surface		
Sampler Initials:	JMS	Date:	8-26-10
Scale Number:	820-06-06-002	Cal. Due Date:	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26JL8	K	N/A	N/A	25.87	31.94	6.07	No Methanol
B26JL8	L	N/A	N/A	26.00	31.68	5.68	No Methanol
B26JL8	M	N/A	N/A	26.22	31.40	5.18	No Methanol
B26JL8	N	N/A	N/A	26.08	31.70	5.62	No Methanol
B26JL8	P	N/A	N/A	26.20	31.30	5.10	No Methanol
B26JL8	W	37.102	36.97	37.35	42.77	5.42	10mL
B26JL8	X	37.777	37.61	38.01	43.62	5.61	10mL
B26JL8	Y	36.818	36.66	37.03	42.45	5.42	10 mL
B26MN7	*	36.912	36.75	37.13	N/A	N/A	10mL

1. Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

   Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

   Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2. Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3. Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4. Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5. Soil weight is the vial with sample minus Initial Weight.

Type	Document No.	Rev/Mod	Release Date	Page
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Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-058	PAGE 1 OF 1
COLLECTOR Harris / Sneok	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH Surface Dup.	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CM8	OTHER LIQUID	8-26-10	0915	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris Dan Harris	8-26-10 1020	Richard Ristedle	8-26-10 1020
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This SAF addresses the one methanol process control sample collected whenever a VOA sample is collected.

O/U
RK

GRP# 20100584
SAM# 510 V00 ~~1868~~ MHel
Y ~~1889~~ RHel
1885

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-258	PAGE 1 OF 1
COLLECTOR Harris / Sneak	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE BP	DATA TURNAROUND
SAMPLING LOCATION C7680 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH Surface Dup.	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION				Cool <-7C and >-20C	MeOH/Cool~4C
HOLDING TIME				14 Days	14 Days
TYPE OF CONTAINER				Gr*	Gr*
NO. OF CONTAINER(S)				5	3
VOLUME				40mL	40mL
SAMPLE ANALYSIS				VOA - 5035/8260 (LOW LEVEL) (TP):	VOA - 5035/8260 (HIGH LEVEL) (TP):
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26JL9	SOIL	8-26-10	0915	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris Dan Harris	8-26-10 1020	Rfitted RKSteele	8-26-10 1020
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, and 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

GRP # 20100584
Sam # 510400 ~~1866~~ 1883
~~1867~~ 1884
Y RKSteele 8-26-10

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-257	PAGE 1 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-068084	ACTUAL SAMPLE DEPTH Surface Dup	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	G/P
		NO. OF CONTAINER(S)	1
		VOLUME	500mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26JK9	SOIL	8-26-10	0915	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris	DATE/TIME 8-26-10 1020	RECEIVED BY/STORED IN R L Steele RLSteele	DATE/TIME 8-26-10	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS OC O/RK GRP # 20100584 Sam # S10V00 ~~1869~~ Y 1886
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-257	PAGE 2 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Surface Dup	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH Surface Dup	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7680 Surface Dup.		
Sampler Initials:	SAP	Date:	8-26-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-4-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weight[5] (grams)	Methanol in sample bottle (ml)
B26J29	K	N/A	N/A	26.33	32.38	6.05	No Methanol
B26J29	L	N/A	N/A	26.17	31.90	5.73	No Methanol
B26J29	M	N/A	N/A	26.11	32.30	6.19	No Methanol
B26J29	N	N/A	N/A	25.92	31.77	5.85	No Methanol
B26J29	P	N/A	N/A	26.03	32.40	6.37	No Methanol
B26J29	W	37.716	37.58	37.94	43.72	5.78	10 ml
B26J29	X	37.506	37.35	37.73	43.83	6.10	10 ml
B26J29	Y	36.951	36.82	37.19	42.66	5.47	10 ml
B26CMB	*	37.350	37.19	37.60	N/A	N/A	10 ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

09/15

Type	Document No.	Rev/Mod	Release Date	Page
CONTINUOUS	TO-080-901	A-3	05/10/2010	18 of 18

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev E.G.0

Date Samples Received: 8-27-10 Group #: 20100583

Number of Samples: 1 set C-Farm C7680 I001 Y584

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete	✓		on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	3.0 / 11.2		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling	✓		
• Sampling location or origin	✓		
• Container type, size, and number	✓		
• Analysis request is clear	✓		
• Signature of persons relinquishing and receiving samples	✓		
• Date and/or time of sample custody exchange	✓		
Verify that sample numbers on containers match the COC and/or RSA	✓		
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? RFS PM Initials [illegible] Date 8.27.10

If No, comment on communication and resolution: PM G. R. Tenner

Other Comments:

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-082-066	PAGE 1 OF 1
COLLECTOR Shook, Villamel	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Trip Blank 2	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 5' to 7'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool≤4°C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGlr
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CV2	WATER	8-27-10	1230	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Scott Shook	DATE/TIME 8-27-10 1404	RECEIVED BY/STORED IN Patrick R Steele	DATE/TIME 8-27-10 1400	3 VOA/pk GRP# 20100583 Sam# 510V001865
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-076	PAGE 1 OF 1
COLLECTOR Snook, Villarreal	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Field Blank 2	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 5' to 7'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	HCl or H2SO4 to pH <2/Cool≤4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CW3	WATER	8-27-10	1245	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Scott Snook	DATE/TIME 1404 8-27-10	RECEIVED BY/STORED IN Rita Villarreal	DATE/TIME 8.27.10 1400	3°C/pk GRP# 20100583 Sam# S10V001855
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-020	PAGE 1 OF 1
COLLECTOR Shook / Villarreal	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5599	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION G7680 I001	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 5' to 7'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CH1	OTHER LIQUID	8-27-10	1315	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Scott Sweet	8-27-10 1404	R.L. Stoelb RJS/Stoelb	8-27-10 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

3 OC / RS

Lot# 20100584
Sub# 510V001902

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-139	PAGE 1 OF 1
COLLECTOR Snook / Villarreal	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 001	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 5' to 7'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF):	VOA - 5035/8260 (HIGH LEVEL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C27	SOIL	8-27-10	1315	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Scott Snook	DATE/TIME 8-27-10 1404	RECEIVED BY/STORED IN Richard Ristaolo	DATE/TIME 8-27-10 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

3°C / -11°C / NK

CRF# 20100584
SAM# S10V001900
1901

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-138	PAGE 1 OF 2
COLLECTOR Snook / Villarreal	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 001	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 5' to 7'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C28	SOIL	8-27-10	1315	✓

CHAIN OF POSSESSION		SIGN/.PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Scott Snook	8-27-10 1404	[illegible] RJ Stoelk	8.27.10 1400	20C / RJH
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	GRP# 20100584
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	Sam# S10V001903 1904 1905
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-138	PAGE 2 OF 2
COLLECTOR	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 001	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

-7160

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7680 I001		
Sampler Initials:	SAS	Date:	8-27-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C27	K	N/A	N/A	26.12	31.38	5.26	No Methanol
B26C27	L	N/A	N/A	26.17	31.46	5.29	No Methanol
B26C27	M	N/A	N/A	26.12	31.21	5.09	No Methanol
B26C27	N	N/A	N/A	26.03	32.54	6.51	No Methanol
B26C27	P	N/A	N/A	26.11	31.16	5.05	No Methanol
B26C27	W	36.911	36.85	37.18	41.52	4.34	10ml
B26C27	X	37.187	37.01	37.43	42.02	4.59	10ml
B26C27	Y	37.214	37.17	37.50	42.52	5.02	10 ml
B26CH1	*	37.173	37.06	37.42	N/A	N/A	10ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 6.0

Date Samples Received: 8-29-10 Group #: 20100 583, 584

Number of Samples: 3 sets C-Farm VADOSE C 7680, I002, 3, 4, 3FB, 1TB

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete	✓		on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	2.0/N/A		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling	✓		
• Sampling location or origin	✓		
• Container type, size, and number	✓		
• Analysis request is clear	✓		
• Signature of persons relinquishing and receiving samples	✓		
• Date and/or time of sample custody exchange	✓		
Verify that sample numbers on containers match the COC and/or RSA	✓		
Samples stored properly (e.g., refrigeration)	✓		2B Fridge

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? _____ PM Initials _____ Date _____

If No, comment on communication and resolution:

Other Comments:

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-067	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Trip Blank 3	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFUS-09-005	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 10' - 12'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool=4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28CV3	WATER	8-29-10	0745	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	VOA/RK 20100583 510V001857
Dan Harris, Dan Snook	8-29-10 1147	RHSteele	8-29-10	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-077	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Field Blank 3	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 10' - 12'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cooled*
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CW4	WATER	8-26-10	0750	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris	DATE/TIME 8-26-10 1147	RECEIVED BY/STORED IN RHSteele RHSteele	DATE/TIME 8-26-10 1147	QC N/A 20100583 S10V001847
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-011	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 I002	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 10' - 12'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CH2	OTHER LIQUID	8-29-10	0830	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Adams Dan Harris 8-29-10	1147	RBSteele RBSteele 8-29-10	1147
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 503SA.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

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LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-141	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-6589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 002	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS- 09-003	FIELD LOGBOOK NO. TFVZ 10-000004	ACTUAL SAMPLE DEPTH 10' - 12'	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gl*	Gl*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TPI)	VOA - 5035/8260 (HIGH LEVEL) (TPI)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B28C29	SOIL	8-29-10	0830	/	/

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris Dan Harris	8-28-10 1147	RT Stock RT Stock	8-29-10 1147
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

2 °C
9 °C
PK

20100584
510500 1920
1921

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-140	PAGE 1 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 002	PROJECT DESIGNATION WMA C Sampling for CHS		SAF NO. V10-003		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 10'-12'	COA N/A	METHOD OF SHIPMENT Govc. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs jar/Liners
		NO. OF CONTAINER(S)	2
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C28	SOIL	8-29-10	0830	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
[signature]	8-29-10 1147	[signature]	8-29-10 1147	2°C
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	20100584
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	510V00 1923
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	1924
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-140	PAGE 2 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 002	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV3-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 10' - 12'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7680 I 002		
Sampler Initials:	SAS	Date:	8-29-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C29	K	N/A	N/A	26.11	31.54	5.43	No Methanol
B26C29	L	N/A	N/A	26.13	31.05	4.92	No Methanol
B26C29	M	N/A	N/A	26.14	31.07	4.93	No Methanol
B26C29	N	N/A	N/A	26.31	31.16	4.83	No Methanol
B26C29	P	N/A	N/A	25.95	31.36	5.41	No Methanol
B26C29	W	37.177	37.03	37.46	42.16	4.70	10ml
B26C29	X	36.692	36.53	36.90	41.56	4.66	10ml
B26C29	Y	36.739	36.57	36.96	41.71	4.75	10ml
B26CH2	*	37.084	36.93	37.31	N/A	N/A	10ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between - 4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-078	PAGE 1 OF 1
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Field Blank 4	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 14' - 16'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool=4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water Wi=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	8Gs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CW5	WATER	8-29-10	0855	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Dwayne DeHarris	8-29-10 1147	RE Steele	8-29-10 1147	0C/2/Rk
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

20100583
S10V00 1848

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-012	PAGE 1 OF 1
COLLECTOR: Harris / Snook	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: 9P	DATA TURNAROUND: 75 Days / 75 Days
SAMPLING LOCATION: C7680 1003	PROJECT DESIGNATION: WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO.: V10-012	AIR QUALITY: ☐	
ICE CHEST NO.: TFVS-09-003	FIELD LOGBOOK NO.: TFVZ-10-000004	ACTUAL SAMPLE DEPTH: 14' to 16'	COA: N/A	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8015/8260 (TCL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CH3	OTHER LIQUID	8-29-10	0935	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris Dan Harris	8-29-10 1147	Robert R Steele	8.29.10 1147
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		/	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

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LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-143	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 003	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 14' to 16'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8085/8260 (LOW LEVEL) (TF):	VOA - 8085/8260 (HIGH LEVEL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C31	SOIL	8-29-10	0935	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Dustin Dunthorn	DATE/TIME 8-29-10 1147	RECEIVED BY/STORED IN RTSteel RTSteel 6/6	DATE/TIME 8-29-10 1147
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.

** The laboratory is to use one of the low level VOA bottles for moisture content determination.

** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

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LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-142	PAGE 1 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7580 003	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 14-16'	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs jar/Liners
		NO. OF CONTAINER(S)	3 A,B,C RK
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C30	SOIL	8-29-10	0935	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
DanHarris DanHarris	8-29-10 1147	RFSteele RFSteele	8.29.10 1147	VU/RK
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

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SPV001943 A
1944 B
1945 C

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-142	PAGE 2 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 003	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV2-09-003	FIELD LOGBOOK NO. TFV2-10-000884	ACTUAL SAMPLE DEPTH 14'-16'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium (Plutonium-238, Plutonium-239/240); Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling	

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7680 I003						
Sampler Initials:	SAS				Date:	H 8-29-10	
Scale Number:	820-66-06-002				Cal. Due Date:	11-9-10	
Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C31	K	N/A	N/A	25.97	30.25	4.28	No Methanol
B26C31	L	N/A	N/A	26.05	29.30	3.25	No Methanol
B26C31	M	N/A	N/A	26.13	29.71	3.58	No Methanol
B26C31	N	N/A	N/A	26.16	30.76	4.60	No Methanol
B26C31	P	N/A	N/A	26.15	31.01	4.86	No Methanol
B26C31	W	37.844	37.70	38.03	42.70	4.67	10ml
B26C31	X	36.568	36.43	36.79	41.66	4.87	10ml
B26C31	Y	36.969	36.78	37.17	42.10	4.93	10ml
B26CN3	*	37.142	37.01	37.37	N/A	N/A	10ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

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Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-079	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Field Blank 5	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 17' to 19'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	HCl or H2SO4 to pH <2/Cooled*
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28CW6	WATER	8-29-10	1010	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Dan Harris Dan Harris	8-29-10 1147	Richard R Steele	8-29-10 1147	20100583 SLOV001849
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-013	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 I004	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 17' to 19'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8015/8260 (TCL) (TF)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28CH4	OTHER LIQUID	8-29-10	1050	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris	DATE/TIME 8-28-10 1147	RECEIVED BY/STORED IN RHSteele	DATE/TIME 8.29.10 1147
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

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LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-145	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P	DATA TURNAROUND
SAMPLING LOCATION 7680 004	PROJECT DESIGNATION WMA C Sampling for CHS		SAF NO. V10-003	AIR QUALITY ☐	75 Days / 75 Days
ICE CHEST NO. TFVS - 09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 17' to 19'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (TF);	VOA - 5035/8260 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C33	SOIL	8-29-10	1050	/	/

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris Dan Harris	8-29-10 1147	RHSteele RHSteele	8-29-10 1147
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

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LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-144	PAGE 1 OF 2
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 004	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV3-09-005	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 17' - 19'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs jar/Liners
		NO. OF CONTAINER(S)	3 R,B1
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C32	SOIL	8-29-10	1050	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Dan Harris	8-29-10 1147	RA Stegelg	8-29-10 1147	20100584 S10V00-1963 A 1964 B 1965 C
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-144	PAGE 2 OF 2
COLLECTOR Hurons / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE BP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 004	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 17'-19'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

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VOC Soil and Sediment Sampling	

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7680 I004		
Sampler Initials:	SAS	Date:	8-29-10
Scale Number:	820-66-06-002	Cal. Due Date:	9-11-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C33	K	N/A	N/A	26.28	31.00	4.72	No Methanol
B26C33	L	N/A	N/A	26.19	29.79	3.60	No Methanol
B26C33	M	N/A	N/A	26.19	31.36	5.17	No Methanol
B26C33	N	N/A	N/A	26.16	29.97	3.81	No Methanol
B26C33	P	N/A	N/A	26.12	29.63	3.51	No Methanol
B26C33	W	37.176	37.00	37.38	42.78	5.40	10ml
B26C33	X	36.520	36.40	36.76	41.74	4.98	10ml
B26C33	Y	37.159	37.00	37.38	42.11	4.73	10ml
B26CH4	*	37.466	37.36	37.72	N/A	N/A	10ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between - 4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev 66.0

Date Samples Received: 8.31.10 Group #: 20100584 Y585

Number of Samples: 1 set C-Farm VADOSE

Sample Custodian: T. McGlock

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	Y		
RSR provided?	Y		
Verify GKI is complete	Y		
Check that outer custody seal is intact, if present	Y		
Record cooler temperature in centigrade, as appropriate	8°C / 18°C		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	Y		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	Y		
• Date and time of sampling	Y		
• Sampling location or origin	Y		
• Container type, size, and number	Y		
• Analysis request is clear	Y		
• Signature of persons relinquishing and receiving samples	Y		
• Date and/or time of sample custody exchange	Y		
Verify that sample numbers on containers match the COC and/or RSA	Y		
Samples stored properly (e.g., refrigeration)	Y		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials SPR Date 8/31/10

If No, comment on communication and resolution:

Other Comments:

A-6005-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-068	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Trip Blank 4	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 43' to 45'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2(Cool <4°C)
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGlass
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (YQ1) (YF)

0°C

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CV4	WATER	8-31-10	0835	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
[signature] 8-31-10	1045	[signature]	8/31/10 @1045	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	GRB# 20100583
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	Stm# 510V001858
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-082-080	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Field Blank 6	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS - 09 - 083	FIELD LOGBOOK NO. TFUL-10-000004	ACTUAL SAMPLE DEPTH 43' - 45'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool=4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGlr*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

0°C

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CW7	WATER	8-31-10	0845	/

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Dan Aaron Dan Harris	8-31-10 1045	[illegible]	8/31/10 @ 1045	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	GRP# 20100583
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	Stmt# 510U001850
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-014	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 1005	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFU3-09-003	FIELD LOGBOOK NO. TFV2-10-000034	ACTUAL SAMPLE DEPTH 43' - 45'	COA n/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	Glr*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260/8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28CH5	OTHER LIQUID	8-31-10	0935	/

Space Reserved 8-31-10

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris	DATE/TIME 8-31-10 1045	RECEIVED BY/STORED IN Tim Snook	DATE/TIME 8/31/10 @ 1045	** All VOA samples will be collected using EPA Method 5035A. ** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

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GRPH 20100584
SAM # ~~S10T00~~ altered
S10V002046

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-147	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 005	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS-09-005	FIELD LOGBOOK NO. TFUZ-10-000054	ACTUAL SAMPLE DEPTH 43' - 45'	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <-7C and >-20C	MEDH/Cool~4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gl*	Gl*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 8085/8260 (LOW LEVEL) (TF);	VOA - 5035/8260 (HIGH LEVEL) (TF);

0°C
-18°C
RG

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C35	SOIL	8-31-10	0935	—	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris	DATE/TIME 8-31-10 1045	RECEIVED BY/STORED IN T.W. Collock	DATE/TIME 8/31/10 @ 1045
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

GRP# 20100584
Sam# 510400 2044
Y 2045

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-146	PAGE 1 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 005	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-00000-P	ACTUAL SAMPLE DEPTH 43' - 45'	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gl Jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

0.e

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C34	SOIL	8-31-10	0935	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Deshawn Dan Harris	DATE/TIME 8-31-10 1045	RECEIVED BY/STORED IN TL Gilbert	DATE/TIME 8/31/10 @ 1045	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS Grp# 20100554 Sam# 510000 2047 2048 2049
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-146	PAGE 2 OF 2
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 005	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 43' - 45'	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

8/30/2010 8:37 AM	WORKING COPY

VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C-7680 I005		
Sampler Initials:	SMS	Date:	8-31-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C35	K	N/A	N/A	26.28	31.55	5.27	No Methanol
B26C35	L	N/A	N/A	26.24	31.78	5.54	No Methanol
B26C35	M	N/A	N/A	26.22	31.67	5.45	No Methanol
B26C35	N	N/A	N/A	26.12	31.95	5.83	No Methanol
B26C35	P	N/A	N/A	26.13	31.30	5.17	No Methanol
B26C35	W	37.588	37.51	37.90	42.76	4.86	10ml
B26C35	X	37.338	37.26	37.66	42.48	4.82	10ml
B26C35	Y	37.453	37.38	37.78	42.94	5.16	10ml
B26CH5	*	37.773	37.71	38.12	N/A	N/A	10ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between - 4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev GEC

Date Samples Received: _____ Group #: 20100583

Number of Samples: 1 set C-Farm VADOSE C7680 I006 Y 584

Sample Custodian: [illegible]

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?	✓		
Verify GKI is complete	✓		on file
Check that outer custody seal is intact, if present	✓		
Record cooler temperature in centigrade, as appropriate	~~Y/N~~		☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling	✓		
• Sampling location or origin	✓		
• Container type, size, and number	✓		
• Analysis request is clear	✓		
• Signature of persons relinquishing and receiving samples	✓		
• Date and/or time of sample custody exchange	✓		
Verify that sample numbers on containers match the COC and/or RSA	✓		
Samples stored properly (e.g., refrigeration)	✓		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials DPR Date 9-1-10

If No, comment on communication and resolution:

Other Comments:

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-069	PAGE 1 OF 1
COLLECTOR Harris/Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Trip Blank5	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFV5-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 92'-94'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	HCl or H2SO4 to pH <2/Cool≤4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGlr*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TPI)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CV5	WATER	09/01/10	0900	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Azra Dan Azra	DATE/TIME 9-1-10 1110	RECEIVED BY/STORED IN RJSteele RJSteele	DATE/TIME 9-1-10 1110	100/RX GRP # 20100583 Sam. # 510V00 1859
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-081	PAGE 1 OF 1
COLLECTOR HARRIS / SNOOK	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Field Blank 7	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 92-94'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool=4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGlass
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CW8	WATER	01/09/10	0915	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Dan Harris Dan Harris	DATE/TIME 9-1-10 1110	RECEIVED BY/STORED IN R Kiteele R Kiteele	DATE/TIME 9-1-10 1110	-1 U RK GRP# 20100583 SAM# 510V001851
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-015	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 I006	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 92'-94'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	GE*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TP):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CH6	OTHER LIQUID	01/09/10	1015	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Dan Berlin Dan Berlin	DATE/TIME 9-1-10 1110	RECEIVED BY/STORED IN RA Stat RA Stat 9-1-10	DATE/TIME 1110
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

DU/RA

GRPH 20100584
SAM # 510V002068

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-149	PAGE 1 OF 1
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 006	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS-09-008	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 92'-94'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	HSOH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gl*	Gl*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8035/8260 (LOW LEVEL) (TF);	VOA - 8035/8260 (HIGH LEVEL) (TF);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C37	SOIL	9-1-10	1015	—	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dan Harris Dan Harris	9-1-10 1110	RAStEEle RASTEELE	9-1-10 1110
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

-10U
-90U
DK

GRPH 20100589
SAMP# 510U00 2066
2067

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-148	PAGE 1 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE SP AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 006	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 92'-94'	COA n/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Ga/Jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	150g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C36	SOIL	9-1-10	1015	—

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Dan Harris Dan Harris	9-1-10 1110	RFSteele RFSteele	9-1-10 1110	DC 9-1 RFS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	GRP # 20100584
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SAM # S10V00 2069 A
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2070 B
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	2071 C
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-083-148	PAGE 2 OF 2
COLLECTOR Harris / Snook	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 006	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUZ-10-000084	ACTUAL SAMPLE DEPTH 92' - 94	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

8/30/2010 8:37 AM	WORKING COPY

VOC Soil and Sediment Sampling

Data Sheet 1 – Sample Record Sheet

SAMPLE RECORD SHEET

Location:	C16B0I 006		
Sampler Initials:	DH / SAS	Date:	01 Sept 10
Scale Number:	B20-06-06-002	Cal. Due Date:	11-09-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C37	K	N/A	N/A	26.13	30.75	4.62	No Methanol
B26C37	L	N/A	N/A	26.08	28.68	2.60	No Methanol
B26C37	M	N/A	N/A	26.15	30.41	4.26	No Methanol
B26C37	N	N/A	N/A	26.03	29.26	3.23	No Methanol
B26C37	P	N/A	N/A	26.05	29.00	2.95	No Methanol
B26C37	W	37.680	37.59	37.99	42.83	4.84	10 ml
B26C37	X	37.491	37.44	37.85	42.81	4.98	10 ml
B26C37	Y	36.986	36.92	37.31	41.89	4.58	10 ml
B26H6	*	37.159	37.11	37.50	N/A	N/A	10 ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev EE-0

Date Samples Received: 9/1/10 Group #: 20100584

Number of Samples: C-Form (I007) TB-6, FB-8 20100583

Sample Custodian: C [illegible] (I008) FB-9

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	Y		
RSR provided?	Y		
Verify GKI is complete	Y		on file
Check that outer custody seal is intact, if present	Y		-16 °C
Record cooler temperature in centigrade, as appropriate	Y		☐ Check if no cooler and/or no ice 0°C
Samples are intact and in good condition	Y		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	Y		
• Date and time of sampling	Y		
• Sampling location or origin	Y		
• Container type, size, and number	Y		
• Analysis request is clear	Y		
• Signature of persons relinquishing and receiving samples	Y		
• Date and/or time of sample custody exchange	Y		
Verify that sample numbers on containers match the COC and/or RSA	Y		
Samples stored properly (e.g., refrigeration)	Y		

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials DPR Date 9/2/10

If No, comment on communication and resolution:

Other Comments:

A-6006-342 (REV 0)

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-070	PAGE 1 OF 1
COLLECTOR Campbell / Henry	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Trip Blank 6	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 116 – 118	COA n/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	HCl or H2SO4 to pH <2/Cooled/C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGa*
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CV6	WATER	9-1-10	1655	✓

20100583
S10V001860

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Campbell	DATE/TIME 9-1-10 2200	RECEIVED BY/STORED IN [illegible]	DATE/TIME 9/10 2200	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-002	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Field Blank 8	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 116-118	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2[illegible]
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGlP
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TF)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CW9	WATER	9-1-10	1710	—

20100583
S10V001852

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Campbell Campbell	DATE/TIME 9-1-10 2200	RECEIVED BY/STORED IN [illegible]	DATE/TIME 9/10 2200	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-016	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 I007	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFUS-09-003	FIELD LOGBOOK NO. TFUL-10-000004	ACTUAL SAMPLE DEPTH 116' - 118'	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C
		HOLDING TIME	14 Days
		TYPE OF CONTAINER	Gl*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL) (TT);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CH7	OTHER LIQUID	9-1-10	1740	/

Group 20100584
S10V002501

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Campbell	DATE/TIME 9-1-10 2200	RECEIVED BY/STORED IN Edwards	DATE/TIME 9/1/10 2300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.

** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-1S1	PAGE 1 OF 1
COLLECTOR: Campbell / Harris	COMPANY CONTACT: TEMPLETON, AM	TELEPHONE NO.: 373-5589	PROJECT COORDINATOR: BERLIN, PC	PRICE CODE: BP	DATA TURNAROUND: 75 Days / 75 Days
SAMPLING LOCATION: 7680 007	PROJECT DESIGNATION: WMA C Sampling for CMS		SAF NO.: V10-003	AIR QUALITY: ☐	
ICE CHEST NO.: TFUS - 09 - 023	FIELD LOGBOOK NO.: TFUZ-10-000004	ACTUAL SAMPLE DEPTH: 116' - 118	COA: n/a	METHOD OF SHIPMENT: Govt. Vehicle	
SHIPPED TO: 222-S Lab Operations	OFFSITE PROPERTY NO.: n/a		BILL OF LADING/AIR BILL NO.: n/a		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4C
HOLDING TIME	14 Days	14 Days
TYPE OF CONTAINER	Gl*	Gl*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	VOA - 8015/8260 (LOW LEVEL) (TF):	VOA - 8015/8260 (HIGH LEVEL) (TF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B26C39	SOIL	9-1-10	1740	—	—

Group 20100584
S10V002499
2500

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Chad Campbell	DATE/TIME: 9-1-10 2200	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 9/1/10 2200
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

0°C

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-803-150	PAGE 1 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 007	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV3-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 116'-118'	COA n/a	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/a		BILL OF LADING/AIR BILL NO. n/a		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gl jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B28C38	SOIL	9-1-10	1740	✓

20100584
S10V002502
2503
2504

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Cahill Campbell	DATE/TIME 9-1-10 2200	RECEIVED BY/STORED IN [illegible]	DATE/TIME 9/1/10 2200	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-150	PAGE 2 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 007	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFUS - 09 - 063	FIELD LOGBOOK NO. TFUZ-10-000004	ACTUAL SAMPLE DEPTH 116' - 118'	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium (Plutonium-238, Plutonium-239/240); Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

8/30/2010 8:37 AM	WORKING COPY
VOC Soil and Sediment Sampling	

~~Data Sheet 1 – Sample Record Sheet~~

SAMPLE RECORD SHEET

Location:	C-7680 / I007		
Sampler Initials:	DH, BC	Date:	9-1-10
Scale Number:	820-66-06-002	Cal. Due Date:	11-9-10

Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C39	K	N/A	N/A	26.11	31.14	5.03	No Methanol
B26C39	L	N/A	N/A	26.39	31.75	5.36	No Methanol
B26C39	M	N/A	N/A	26.20	31.06	4.85	No Methanol
B26C39	N	N/A	N/A	26.58	31.90	5.32	No Methanol
B26C39	P	N/A	N/A	26.29	30.96	4.67	No Methanol
B26C39	W	37.763	37.60	38.00	43.06	5.06	10 ml
B26C39	X	37.704	37.66	38.04	43.77	5.73	10 ml
B26C39	Y	37.558	37.52	37.90	42.69	4.79	10 ml
B26CA7	*	37.418	37.34	37.74	N/A	N/A	10 ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-002-083	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 7P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 Field Blank 9	PROJECT DESIGNATION WMA C Sampling for CMS - QC Sampling		SAF NO. V10-002		
ICE CHEST NO. TFV5-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 142-144	COA n/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. n/A		BILL OF LADING/AIR BILL NO. n/a		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or H2SO4 to pH <2/Cool<6C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	40#
		NO. OF CONTAINER(S)	3
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8260 (TCL) (TT):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CX0	WATER	9-1-10	2000	—

20100583
S10V001853

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Chris Campbell	DATE/TIME 9-1-10 2200	RECEIVED BY/STORED IN Shawna Edwards	DATE/TIME 9/1/10 2200	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-012-017	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 9P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION C7680 X008	PROJECT DESIGNATION WMA C Sampling for CMS - Methanol Process Control Sample		SAF NO. V10-012		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 142-144	COA N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX**	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14-Days
		TYPE OF CONTAINER	GP
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 8015/8260 (TCL) (TP)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26CH8	OTHER LIQUID	9-1-10	2100	✓

20100584
S10V002796

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Campbell	DATE/TIME 9-1-10 2200	RECEIVED BY/STORED IN Schwarz	DATE/TIME 9-1-10 2200	** All VOA samples will be collected using EPA Method 5035A. ** This COC addresses the one methanol process control sample collected whenever a VOA sample is collected.
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-153	PAGE 1 OF 1
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 008	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFVS-09-003	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 142 — 144	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool <-7C and >-20C	MECH/Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14 Days	14 Days
		TYPE OF CONTAINER	Gs*	Gs*
		NO. OF CONTAINER(S)	5	3
		VOLUME	40mL	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (LOW LEVEL) (YF):	VOA - 5035/8260 (HIGH LEVEL) (YF):

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B28C41	SOIL	9-1-10	2100	✓	✓

20100584 ~~02~~ 9/1/10
S10V 002~~764~~ 2794
2795

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Campbell C-pbell	9-1-10 2200	[illegible]	9-1-10 2200
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** All VOA samples will be collected using EPA Method 5035A.
** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis.
** The laboratory is to use one of the low level VOA bottles for moisture content determination.
** VOA bottles will be labeled with a suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-803-152	PAGE 1 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 008	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV5-09-003	FIELD LOGBOOK NO. TFV2-10-000004	ACTUAL SAMPLE DEPTH 142-144	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool~4C
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	14/40 Days
		TYPE OF CONTAINER	Gs Jar/Liners
		NO. OF CONTAINER(S)	3
		VOLUME	160g
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B26C40	SOIL	9-1-10	2100	✓

20100584
S10Y002797
2798
2799

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Campbell C-Campbell	9-1-10 2200	Samuel R Edwards	9-1-10 2200	-16°C
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Washington River Protection Solutions	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			V10-003-152	PAGE 2 OF 2
COLLECTOR Campbell / Harris	COMPANY CONTACT TEMPLETON, AM	TELEPHONE NO. 373-5589	PROJECT COORDINATOR BERLIN, PC	PRICE CODE 8P AIR QUALITY ☐	DATA TURNAROUND 75 Days / 75 Days
SAMPLING LOCATION 7680 008	PROJECT DESIGNATION WMA C Sampling for CMS		SAF NO. V10-003		
ICE CHEST NO. TFV8-09-003 S/Vc 9-140	FIELD LOGBOOK NO. TFVZ-10-000004	ACTUAL SAMPLE DEPTH 142-144	COA N/A	METHOD OF SHIPMENT Govt. Vehicle	
SHIPPED TO 222-S Lab Operations	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

*** After VOA bottles for the direct pushes are filled, the sampler will cap remaining liners for shipment to 222-S. Where capping is not possible, the sample shall be put into 500 mL or 250 mL glass bottles with Teflon-lined lids.

(1) Semi-VOA - 8270 Complete (TF); TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D; PCBs - 8082; Pesticides - 8081 (TF); 1668 PCB CONGENER (TCL); ICP Metals - 6010 (SW-846) (TF); Mercury - 7471 - (CV) (TF); 300.7_AMMONIUM (TF); IC Anions - 9056; Sulfide - 9215; Total Cyanide - 9014 (TF); pH (Soil) - 9045; Americium-241 (TF); C-14; CURIUM; GAMMA ENERGY ANALYSIS (TF); H3 - TRITIUM; I129_SEP_GEA (TF); Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Nickel-63 (TF); RADISO_ICPMS (TF); Selenium-79 (TF); Strontium-90; Conductivity - 9050_WE; Percent Solids (TF); Percent Water (TF);

8/30/2010 8:37 AM	WORKING COPY
VOC Soil and Sediment Sampling	

~~Data Sheet 1 – Sample Record Sheet~~

SAMPLE RECORD SHEET

Location:	C-7680 / I008						
Sampler Initials:	CH, BC				Date:	9-1-10	
Scale Number:	820-66-06-002				Cal. Due Date:	11-9-10	
Sample Number	Sample Suffix[1]	Tare Weight provided (grams)	Tare Weight prior to sample[2] (grams)	Initial Weight[3] (grams)	Total Weight[4] (grams)	Soil Weights (grams)[5]	Methanol in sample bottle (ml)
B26C41	K	N/A	N/A	26.47	31.91	5.44	No Methanol
B26C41	L	N/A	N/A	26.29	31.61	5.32	No Methanol
B26C41	M	N/A	N/A	26.35	31.34	4.99	No Methanol
B26C41	N	N/A	N/A	26.46	32.17	5.71	No Methanol
B26C41	P	N/A	N/A	26.14	31.31	5.17	No Methanol
B26C41	W	37.249	37.19	37.53	42.02	4.49	10 ml
B26C41	X	37.735	37.69	38.08	42.59	4.51	16 ml
B26C41	Y	37.707	37.65	38.05	43.89	5.84	16 ml
B26C48	*	37.870	37.81	38.19	N/A	N/A	10 ml

1 Sample suffix of K, L, M, N, and P will not have Methanol in the bottle, freeze these samples to between -7 °C (19.4 °F) and -20 °C (-4 °F)

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

Sample suffix of "*" relates to methanol blank. Cool W, X, Y, and * samples to between -4 °C ± 2 °C (39.2 °F ± 3.6 °F).

2 Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

3 Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

4 Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

5 Soil weight is the vial with sample minus Initial Weight.

APPENDIX F

WASHINGTON STATE DEPARTMENT OF ECOLOGY DOCUMENTS

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ENERGYSOLUTIONS

September 8, 2010 FS-NW-LT-5388

State of Washington
Department of Ecology
Nuclear Waste Program
Hanford Project
3100 Port of Benton Boulevard
Richland, Washington 99354

Subject: Water Well Reports

To Whom It May Concern,

Attached are Water Well Report forms addressing decommissioning operations for eight geotechnical soil borings. These Water Well report forms have been completed with information from field operations (reference Notice of Intent Start Card SE05741 and Abandonment Start Card AE07483). These geotechnical borings are located on the Hanford Site, 200 East Area, C Tank Farm.

These geotechnical soil boring are designated as C7672, C7676, C7682, C7680 (sample borings) and C7671, C7675, C7681, C7679 (exploratory borings).

The fractional section system topographical location for these geotechnical borings is SE ¼ NE ¼, Section 2, Township 12N, Range 26EWM.

If you have any questions, please contact me at 375-9587.

Very truly yours,

Martin G. Gardner, Manager
Remediation and Well Services

jmr

Attachments

CHPRC	- S. H. Worley	R3-60
WRPS	-H.A. Sydnor	E6-31
Energy*Solutions*	- K. D. Reynolds	G2-02
	D. E. Skoglie	G2-02
	R. Z. Steffler	G2-02
	MGG File/LB	

2345 Stevens Drive, Suite 240 • Richland, WA 99354
509.371.8006 • Fax: 509.375.9500 • www.energysolutions.com

ENERGYSOLUTIONS

FS-NW-LT-5388

ATTACHMENTS

Resource Protection Well Reports

Consisting of 9 pages
including cover sheet

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT **CURRENT Notice of Intent No. AE07483**

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

ORIGINAL INSTALLATION Notice of Intent Number: SE05741

Consulting Firm Energy Solutions

Unique Ecology Well IDTag No. C7671

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee

Name (Print Last, First Name) Skoglie, David

Driller/Engineer /Trainee Signature David E. Skoglie

Driller or Trainee License No. 1580

If trainee, licensed driller's Signature and License Number:

Type of Well *("x in box)*

☐ Resource Protection

☒ Geotech Soil Boring

Property Owner U.S. Department of Energy

Site Address 825 Jadwin Ave.

City Richland County Benton

Location SE 1/4-1/4 NE 1/4 Sec 02 Twn 12 R 26E

EWM ☒ or WWM ☐

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____ Long Deg ____ Min ____ Sec ____

Tax Parcel No. N/A

Cased or Uncased Diameter 3.0 inch Static Level N/A

Work/Decommission Start Date 06/14/2010

Work/Decommission Completed Date 08/04/2010

Construction Design	Well Data	Formation Description
The direct push tubing (2.5 inch O.D.) was driven to a depth of 221 ft bgs. The drive point O.D. is ~3.0 inches diameter. Geophysical logging (Moisture and Gamma) was conducted to identify sample locations. The boring was decommissioned and three moisture probes were installed at 124, 84 and 40 ft bgs. Reference Variance Request for Direct Push Bore-holes dated 3/30/2010.		C Tank Farm, 200 East Area, Hanford Site, Benton County Formation was sand with minor gravel layers (noted during driving).
0.0	Surface protection and identification marker (boring number and date decommissioned) were set in place.	
40		
84	Tubing break @ 131 ft bgs. Tubing left in hole from 221 to 131 ft bgs.	
124	0 = bentonite crumbles	
221	S = sand/diatomite	

SCALE: 1"= 74 ft PAGE 1 OF 1

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RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT Notice of Intent No. AE07483

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

ORIGINAL INSTALLATION Notice of Intent Number: SE05741

Consulting Firm Energy Solutions

Unique Ecology Well IDTag No. C7675

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee

Name (Print Last, First Name) Skoglie, David

Driller/Engineer /Trainee Signature David E. Skoglie

Driller or Trainee License No. 1580

If trainee, licensed driller's Signature and License Number:

Type of Well *("x in box)*

☐ Resource Protection

☒ Geotech Soil Boring

Property Owner U.S. Department of Energy

Site Address 825 Jadwin Ave.

City Richland County Benton

Location SE 1/4-1/4 NE 1/4 Sec 02 Twn 12 R 26E

EWM ☒ or WWM ☐

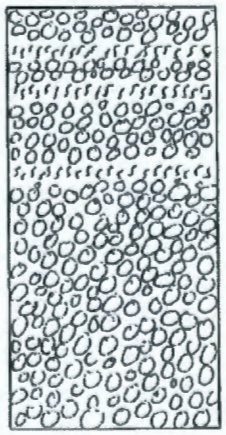
Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____ Long Deg ____ Min ____ Sec ____

Tax Parcel No. N/A

Cased or Uncased Diameter 3.0 inch Static Level N/A

Work/Decommission Start Date 06/16/2010

Work/Decommission Completed Date 08/04/2010

Construction Design	Well Data	Formation Description
The direct push tubing (2.5 inch O.D.) was driven to a depth of 220.9 ft bgs. The drive point O.D. is ~3.0 inches diameter. Geophysical logging (Moisture and Gamma) was conducted to identify sample locations. The boring was decommissioned and three moisture probes were installed at 78, 38 and 20 ft bgs. Reference Variance Request for Direct Push Bore-holes dated 3/30/2010.		C Tank Farm, 200 East Area, Hanford Site, Benton County Formation was sand with minor gravel layers (noted during driving).
0.0 20 38 78 220.9 	Surface protection and identification marker (boring number and date decommissioned) were set in place. Tubing break @ 96 ft bgs. Tubing left in hole from 221 to 96 ft bgs. 0 = bentonite crumbles S = sand/diatomite	

SCALE 1" = 74 ft PAGE 1 OF 1

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RESOURCE PROTECTION WELL REPORT **CURRENT Notice of Intent No. AE07483**

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

ORIGINAL INSTALLATION Notice of Intent Number: SE05741

Consulting Firm Energy Solutions

Unique Ecology Well IDTag No. C7681

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee

Name (Print Last, First Name) Stoglie, David

Driller/Engineer /Trainee Signature David E. Stoglie

Driller or Trainee License No. 1580

If trainee, licensed driller's Signature and License Number:

Type of Well *("x in box)*

☐ Resource Protection

☒ Geotech Soil Boring

Property Owner U.S. Department of Energy

Site Address 825 Jadwin Ave.

City Richland County Benton

Location SE1/4-1/4 NE1/4 Sec 02 Twn 12 R 26E

EWM ☒ or WWM ☐

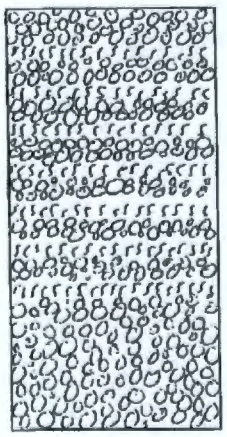
Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____ Long Deg ____ Min ____ Sec ____

Tax Parcel No. N/A

Cased or Uncased Diameter 3.0 inch Static Level N/A

Work/Decommission Start Date 06/16/2010

Work/Decommission Completed Date 08/26/2010

Construction Design	Well Data	Formation Description
The direct push tubing (2.5 inch O.D.) was driven to a depth of 222 ft bgs. The drive point O.D. is ~3.0 inches diameter. Geophysical logging (Moisture and Gamma) was conducted to identify sample locations. The boring was decommissioned and three moisture probes were installed at 146, 127, 107, 87, 67, 47 and 27 ft bgs. Reference Variance Request for Direct Push Bore-holes dated 3/30/2010.		C Tank Farm, 200 East Area, Hanford Site, Benton County Formation was sand with minor gravel layers (noted during driving).
0.0 27 47 67 87 107 127 146 222 	Surface protection and identification marker (boring number and date decommissioned) were set in place. 0 = bentonite crumbles S = sand/diatomite	

SCALE: 1"= 74 ft PAGE 1 OF 1

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RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE07483

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

ORIGINAL INSTALLATION Notice of Intent Number: SE05741

Consulting Firm Energy Solutions

Unique Ecology Well IDTag No. C7679

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee

Name (Print Last, First Name) Skoglie, David

Driller/Engineer/Trainee Signature David E. Skoglie

Driller or Trainee License No. 1580

If trainee, licensed driller's Signature and License Number:

Type of Well *("x in box)*

☐ Resource Protection

☒ Geotech Soil Boring

Property Owner U.S. Department of Energy

Site Address 825 Jadwin Ave.

City Richland County Benton

Location SE1/4-1/4 NE1/4 Sec 02 Twn 12 R 26E

EWM ☒ or WWM ☐

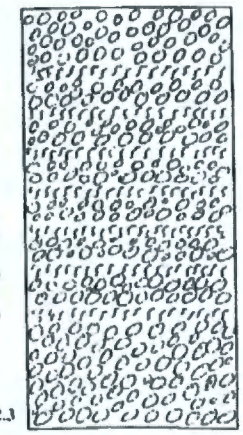
Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____ Long Deg ____ Min ____ Sec ____

Tax Parcel No. N/A

Cased or Uncased Diameter 3.0 inch Static Level N/A

Work/Decommission Start Date 06/22/2010

Work/Decommission Completed Date 09/02/2010

Construction Design	Well Data	Formation Description
The direct push tubing (2.5 inch O.D.) was driven to a depth of 222.3 ft bgs. The drive point O.D. is ~3.0 inches diameter. Geophysical logging (Moisture and Gamma) was conducted to identify sample locations. The boring was decommissioned and three moisture probes were installed at 156, 136, 116, 96, 76, 56 and 36 ft bgs. Reference Variance Request for Direct Push Bore-holes dated 3/30/2010.		C Tank Farm, 200 East Area, Hanford Site, Benton County Formation was sand with minor gravel layers (noted during driving).
0.0 36 56 76 96 116 136 156 222.3 	Surface protection and identification marker (boring number and date decommissioned) were set in place. 0 = bentonite crumbles S = sand/diatomite	

SCALE 1"= 74 ft PAGE 1 OF 1

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RESOURCE PROTECTION WELL REPORT **CURRENT Notice of Intent No. AE07483**

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

ORIGINAL INSTALLATION Notice of Intent Number: SE05741

Consulting Firm Energy Solutions

Unique Ecology Well IDTag No. C7672

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee

Name (Print Last, First Name) Skoglie, David

Driller/Engineer /Trainee Signature David Skoglie

Driller or Trainee License No. 1580

If trainee, licensed driller's Signature and License Number:

Type of Well *("x in box)*

☐ Resource Protection

☒ Geotech Soil Boring

Property Owner U.S. Department of Energy

Site Address 825 Jadwin Ave.

City Richland County Benton

Location SE1/4-1/4 NE1/4 Sec 02 Twn 12 R 26E

EWM ☒ or WWM ☐

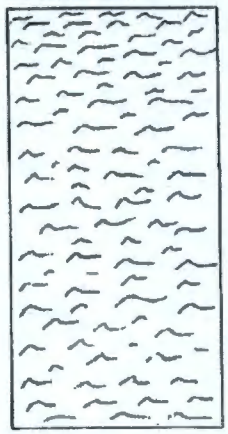
Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____ Long Deg ____ Min ____ Sec ____

Tax Parcel No. N/A

Cased or Uncased Diameter 3.0 inch Static Level N/A

Work/Decommission Start Date 07/08/2010

Work/Decommission Completed Date 07/19/2010

Construction Design	Well Data	Formation Description
The direct push tubing (2.625 inch O.D.) was driven to a depth of 124 ft bgs. The drive point O.D. is ~3.0 inches diameter. Samples were obtained at surface, 5 to 7, 10 to 12, 14 to 16, 37 to 39, 73 to 75, 83 to 85 and 122 to 124 ft bgs. Boring was decommissioned from 124 to surface. Reference Variance Request for Direct Push Bore-holes dated 3/30/2010. 	Location marker (flag) is placed at ground surface and the boring surveyed. ~~~ = bentonite crumbles	C Tank Farm, 200 East Area, Hanford Site, Benton County Formation was sand with gravel layers (noted during driving).

SCALE: 1"= ~42 ft PAGE 1 OF 1

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RESOURCE PROTECTION WELL REPORT **CURRENT Notice of Intent No. AE07483**

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction
☒ Decommission

ORIGINAL INSTALLATION Notice of Intent Number: SE05741

Consulting Firm Energy Solutions

Unique Ecology Well IDTag No. C7676

WELL CONSTRUCTION CERTIFICATION. I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

☒ Driller ☐ Engineer ☐ Trainee

Name (Print Last, First Name) Skoglie, David

Driller/Engineer /Trainee Signature David E Skoglie

Driller or Trainee License No. 1580

If trainee, licensed driller's Signature and License Number:

Type of Well *("x in box)*

☐ Resource Protection
☒ Geotech Soil Boring

Property Owner U.S. Department of Energy

Site Address 825 Jadwin Ave.

City Richland County Benton

Location SE1/4-1/4 NE1/4 Sec 02 Twn 12 R 26E

EWM ☒ or WWM ☐

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____ Long Deg ____ Min ____ Sec ____

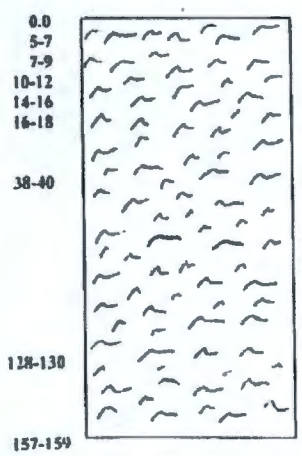
Tax Parcel No. N/A

Cased or Uncased Diameter 3.0 inch Static Level N/A

Work/Decommission Start Date 07/19/2010

Work/Decommission Completed Date 07/29/2010

Construction Design	Well Data	Formation Description
The direct push tubing (2.625 inch O.D.) was driven to a depth of 159 ft bgs. The drive point O.D. is ~3.0 inches diameter. Samples were obtained at surface, 5 to 7, 7 to 9, 10 to 12, 14 to 16, 16 to 18, 38 to 40, 128 to 130 and 157 to 159 ft bgs. Boring was decommissioned from 159 to surface. Reference Variance Request for Direct Push Bore-holes dated 3/30/2010.	Location marker (flag) is placed at ground surface and the boring surveyed. ~~~ = bentonite crumbles	C Tank Farm, 200 East Area, Hanford Site, Benton County Formation was sand with gravel layers (noted during driving).



SCALE: 1"= ~53 ft PAGE 1 OF 1

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RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE07483

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction
☒ Decommission

ORIGINAL INSTALLATION Notice of Intent Number: SE05741

Consulting Firm Energy Solutions

Unique Ecology Well IDTag No. C7682

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

☒ Driller ☐ Engineer ☐ Trainee

Name (Print Last, First Name) Skoglie, David

Driller/Engineer/Trainee Signature David Skoglie

Driller or Trainee License No. 1580

If trainee, licensed driller's Signature and License Number:

Type of Well *("x in box)*

☐ Resource Protection
☒ Geotech Soil Boring

Property Owner U.S. Department of Energy

Site Address 825 Jadwin Ave.

City Richland County Benton

Location SE1/4-1/4 NE1/4 Sec 02 Twn 12 R 26E

EWM ☒ or WWM ☐

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____ Long Deg ____ Min ____ Sec ____

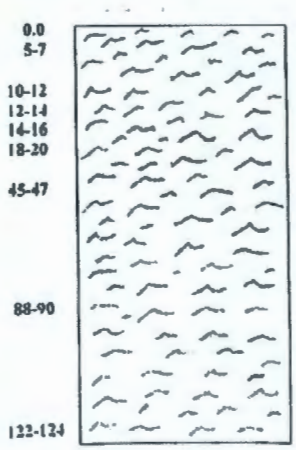
Tax Parcel No. N/A

Cased or Uncased Diameter 3.0 inch Static Level N/A

Work/Decommission Start Date 08/17/2010

Work/Decommission Completed Date 08/25/2010

Construction Design	Well Data	Formation Description
The direct push tubing (2.625 inch O.D.) was driven to a depth of 124 ft bgs. The drive point O.D. is ~3.0 inches diameter. Samples were obtained at surface, 5 to 7, 10 to 12, 12 to 14, 14 to 16, 18 to 20, 45 to 47, 88 to 90, and 122 to 124 ft bgs. Boring was decommissioned from 124 to surface. Reference Variance Request for Direct Push Bore-holes dated 3/30/2010.	Location marker (flag) is placed at ground surface and the boring surveyed. —— = bentonite crumbles	C Tank Farm, 200 East Area, Hanford Site, Benton County Formation was sand with gravel layers (noted during driving).



SCALE 1" = ~42 ft PAGE 1 OF 1

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RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE07483

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction
☒ Decommission

ORIGINAL INSTALLATION Notice of Intent Number: SE05741

Consulting Firm Energy Solutions

Unique Ecology Well IDTag No. C7680

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee

Name (Print Last, First Name) Skoglie, David

Driller/Engineer /Trainee Signature [signature]

Driller or Trainee License No. 1580

If trainee, licensed driller's Signature and License Number:

Type of Well *("x in box)*

☐ Resource Protection
☒ Geotech Soil Boring

Property Owner U.S. Department of Energy

Site Address 825 Jadwin Ave.

City Richland County Benton

Location SE1/4-1/4 NE1/4 Sec 02 Twn 12 R 26E

EWM ☒ or WWM ☐

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____ Long Deg ____ Min ____ Sec ____

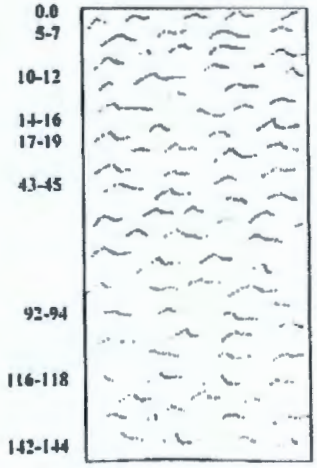
Tax Parcel No. N/A

Cased or Uncased Diameter 3.0 inch Static Level N/A

Work/Decommission Start Date 08/27/2010

Work/Decommission Completed Date 09/02/2010

Construction Design	Well Data	Formation Description
The direct push tubing (2.625 inch O.D.) was driven to a depth of 144 ft bgs. The drive point O.D. is ~3.0 inches diameter. Samples were obtained at surface, 5 to 7, 10 to 12, 14 to 16, 17 to 19, 43 to 45, 92 to 94, 116 to 118 and 142 to 144 ft bgs. Boring was decommissioned from 144 to surface. Reference Variance Request for Direct Push Bore-holes dated 3/30/2010.	Location marker (flag) is placed at ground surface and the boring surveyed. ~~~ = bentonite crumbles	C Tank Farm, 200 East Area, Hanford Site, Benton County Formation was sand with gravel layers (noted during driving).



SCALE 1" = ~48 ft PAGE 1 OF 1

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APPENDIX G

SAFETY DOCUMENTATION

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ENERGYSOLUTIONS	ACTIVITY HAZARD ANALYSIS C-FARM DIRECT PUSH HYDRAULIC HAMMER UNIT OPERATIONS	AHA-09-007- Rev. 0 WRPS

Prepared by:	Robert Zane	Signature:		Date:	11/3/09
Supervisor:	Dave Skoglie	Signature:	David E. Skoglie	Date:	11/03/09
Reviewed by:	Kent Reynolds	Signature:		Date:	11/3/09
Reviewed by:	Mike Powers	Signature:		Date:	

EVERY WORKER MUST UNDERSTAND THE HAZARDS ASSOCIATED WITH THIS ACTIVITY AND THE CORRECTIVE MEASURES TO BE TAKEN. IF YOU DO NOT UNDERSTAND ANY PORTION OF THIS AHA OR HAVE ENCOUNTERED CONDITIONS THAT HAVE NOT BEEN ADDRESSED ADEQUATELY, STOP AND DO NOT PROCEED UNTIL YOU HAVE CONTACTED YOUR SUPERVISOR.

Scope/Description: Multiple boreholes to be pushed at three locations designated in Requisition #195916. Depth of boreholes will be 220' below ground surface or refusal. The intent is to investigate and characterize extent of Vadose zone contamination from sources within the C-Farm. Work be performed with tank farm work package "TFC-WO-09-4264".

Specific Work Location(s): Hanford, 200 East Area, C-Farm, multiple locations.

Minimum PPE Requirements: Safety glasses with side-shields and protective footwear shall be worn in all work areas or as indicated in the body of this AHA.

Activity Tasks:

1. Push casing to desired depth or refusal.
2. Perform geophysical logging for subsurface characterization.
3. Perform sampling using dual string method.
4. Land multi-sensor resistivity probes.
5. Decommission the boreholes and provide secure surface seal.

Topic	Yes	No	Topic	Yes	No
Radiation Work Area	X		Respiratory Hazards		X
Hazardous Waste Operations	X		Noise Exposure	X	
Confined Space		X	Temperature Extremes	X	
Hot Work	X		Hoisting & Rigging	X	
Roof Work		X	Repetitive Motion	X	
Fall Hazard (≥ 6 ft)		X	Awkward Positions	X	
Excavation/Trenching	X		Same Position(s)	X	
Ladders and/or Scaffolding	X		Biological/Vermin	X	
Aerial Lifts		X	Insects/Varmints	X	
Heavy Equipment	X		Signs and Barricades	X	
Lock and Tag	X		Utility Survey required	X	
Site/Vehicle Traffic	X		Explosive Operations		X
Electrical Hazards	X		Asbestos Work		X
Lead Work		X	Other Chemical Hazards	X	
Hazardous Materials/MSDS	X				

SPECIFIC HAZARD AND SAFE WORK REQUIRMENTS

Known and/or potential hazards, including any marked "yes" above, are further evaluated, and specific measures are identified on subsequent pages. This discussion must include identification of the work activity, the specific hazards present, and the safe work requirements/controls (including a hazards assessment/modification for PPE) to be used to alleviate/control the hazard(s).

Work Activity	Hazards Present	Required Safety Measures/PPE
General Site Activities	Fall hazards – slip trip fall	Walking and working surfaces: • Be aware of cobbles and irregular walking surfaces when traversing the site. • Keep work areas picked up of tools and equipment. • Clean up spills or mark the area with safety barricades until the spill can be cleaned up. Ladders: • Use ANSI approved ladders rated for heavy-duty or extra-heavy-duty use (Type I or Type IA). • Inspect ladder prior for defects prior to use. • Verify that periodic inspection was performed within last 12 months by competent person.
	Chemical Use	• Maintain an MSDS at the jobsite for all stored used chemicals. • Personnel shall review the MSDS prior to working with any chemicals. • Personnel shall follow controls specified in MSDS or contact site safety representative for additional guidance.
	Spills	• Plastic sheeting and felt shall be placed beneath equipment that has the potential for leakage of fluids. • An adequate inventory of spill cleanup equipment and materials shall be maintained on site. The spill kit should contain shovels (or be available on location), absorbents, containers, plastic bags, and wipes. • Spills shall be reported to the customer and management immediately.
	Equipment Use	Motorized Equipment: • Shall be maintained as required by the manufacturer. • Shall be inspected daily and documented on appropriate forms (e.g. Field Activity Report, Work Package, Equipment Inspection Forms, etc.). • Equipment needing repair shall be removed from service, unless the supervisor determines it is safe to operate. Forklifts/Rigging: • Forklifts shall be inspected prior to use each shift and the results documented on appropriate form. (e.g. Field Activity Report, Work Package, Equipment Inspection Forms, etc.). • Forklifts and "Below the Hook Lifting Devices" used onsite shall meet the requirements of DOE-RL-92-36 "Hoisting and Rigging Manual" (HRSM).

	Remote Work Area	• Know the location of your work site and be able to describe its location to emergency responders. • If emergency responders are called, send someone to the entry intersections of the site access road and main roadway to direct responders to the site. • A cell phone must be onsite for contacting emergency responders. • Employees who could reasonably anticipate coming in contact with blood or other potentially infectious materials shall meet training and medical requirements of TFC-ESHQ-S-STD-24, REV A-4 (Bloodborne Pathogen Exposure Control Standard). • Maintain a fully stocked first aid kit in accordance with TFC-ESHQ-S-STD-04. • At least one individual on site shall have First Aid/CPR training.
	Emergencies	Fire: • Maintain at least two (2) ABC 20 pound fire extinguishers on site and place within work location for easy access. • Employees should attempt to extinguish incipient stage fires only if they have been trained in the use of fire extinguishers. • Call HFD at **373-3800**. • Evacuate upwind to a safe distance and account for all site personnel and visitors. • The *Hanford Fire Dept. must be notified of all fires even if they have been extinguished.* Injuries: • For minor injuries, transport injured person to the 200 West Medical Aid Station, 2719-WB Bldg or an in town medical facility. • For serious or life threatening injuries, call **373-3800** and administer first aid as indicated by the nature of the injury until emergency medical services arrive. • All injuries are to be immediately reported to the field supervisor and site safety representative. Emergency Evacuation: • All personnel shall respond to Emergency Area alarms by safely securing operations, exiting work area, and taking appropriate emergency response actions, per HGET and radiological training.
	Radiological Hazards	• All employees shall comply with the requirements defined in the client's radiological policies and procedure and the radiological work permit (RWP).

	Site Control Measures – Unplanned Entry	Signs Barricades • The work area shall be posted "Authorized Personnel Only" and controlled to prevent inadvertent entry by non-project personnel. If unathorized personnel enter the controlled area. stop work until they have been escorted out. Training Requirements: • All support, supervisory personnel and visitors entering the site shall read and acknowledge this site safety plan at their initial entry as well as comply with all tank farm entry requirements. including training. • Any revision of this safety plan requires re-reading and re-acknowledgement of the plan by all personnel.
	Inadequate Lighting	• If work is performed during non-daylight hours. set-up lighting to provide a minimum illumination of 5-foot candles in work area.
	Temperature Extremes	Heat Stress: • Brief personnel on symptom recognition and methods of prevention. Use weekly safety meeting to document personnel have been briefed. • Provide drinking water and encourage consumption. • Confer with project safety representative to determine applicable column to follow on work rest regimen table from TFC-ESHQ-S_IH-C-07. • Monitor WBGT temperatures using HMS or jobsite monitoring. • Provide shade and or evaporative cooling (fan mounted misters) as needed in the work area. • Provide cool down area for breaks. Cold Stress: • Brief personnel on symptom recognition and methods of prevention. Use weekly safety meeting to document personnel have been briefed. • Provide drinking water and encourage consumption. • Use portable heaters as needed in the work area. • Wear winter gear. • Allow employees to take warming breaks as needed.
	Adverse Weather Conditions	• Contact the weather station at 373-2716 for information about adverse weather conditions. • Upon receiving the lightning warning within 30 miles notice or observation of lightning in the area stop all work with elevated booms. • Wear googles when wind speeds are great enough to generate blowing dust

	Pressure Washing	• Wear face shield in addition to standard PPE.
	Transporting Equipment Materials	• Secure from movement in all directions.
	Sanitation at work location	• Do not eat, drink, smoke, chew, or apply cosmetics in the work area unless specifically approved by the health and safety and radcon representatives. • Provide wash water and wash hands prior to consuming food or beverages. • Apprise work crew of the nearest toilet facility.
	Biological	• Watch for spiders when reaching into enclosed spaces. • Be careful when handling equipment that has rested on the ground. • If snakes are encountered, do not attempt to handle or molest them. Monitor the snake's whereabouts until it is safely away from the work site. If needed, call the Pest Control (376-7378) to have the snake removed. • Watch for nesting bees and report to pest control. Employees with allergies should notify the supervisor. • Report all bites and stings.
	Underground Utilities	• Obtain an excavation permit prior to conducting push activities. U-Dig (800-424-5555) shall be notified 48 hours prior to excavation to allow time for response by utility companies.
	Overhead Power Lines	• Vehicle boom/mast must be a minimum of 10 ft. away from power lines. • When working within a horizontal distance 20 feet of the center line of the nearest high voltage line, contact Electrical Utilities 372-1660 or 373-7995 for assistance at least 48 hours before the scheduled work. • Avoid moving equipment underneath overhead electric lines or near power poles, when feasible.
	Hazardous Energy	• Prior to performing maintenance that removes guards or exposes the worker to a hazardous energy, secure the source then lock and tag.
	Hot Work	• Obtain a hot work permit from tank farms prior to performing hot work.
	Sharp Edges	• Wear leather gloves when using tools or handling equipment.
	Compressed Gas	• Secure nitrogen cylinder in cart with cap on, when moving. • Store out of direct sunlight.
	Portable Generator	• Ensure that generator is listed by an NRTL (nationally recognized testing laboratory). • Operate in accordance with manufacturer's instructions. • Test GFCI circuit before use.
Moving the tractor and equipment to the designated probe placement location.	Mobile Equipment	• Employees shall perform 360 degree walk-around to ensure that no obstacles are in the path of the vehicle. • When mobilizing to work location use

		appropriate tie-downs during transport. • Use two spotters when moving equipment inside the tank farm, when in confined areas, or near objects that are not readily visible. • Due to top-heavy design of the HHU, be cautious when on hills and avoid side-hilling. • Only qualified personnel shall operate equipment (tractor, forklifts, etc.). • Be aware of moving equipment and always make contact with operator before approaching operating equipment. • Forklift operators shall ensure that the load is secured, stable and does not exceed the rated capacity. • Sound horn whenever blind spots exist. • Be familiar with the locations of overhead hazards. • Wear hard hats and protective toed shoes when working around forklift, tractor, or elevated objects that could fall.
	Equipment Noise	• Personnel shall wear hearing protection, with a minimum NRR of 18, when driving the tractor.
	Falling off tractor	• Employees shall use a three point contact when ascending descending the tractor.
	Pinch Points	• Wear leather or equivalent work gloves when handling equipment. • Be aware of where you place your hands and feet. • Ensure that equipment with rotating type pinch points are guarded while in operation.
	Unstable Surface	• When setting the outriggers (if equipped) up the operator shall ensure that employees are staged away from the tractor. • Cribbing shall be used whenever there is a potential for the surface to give way. Size of cribbing shall be determined by soil density, weight of vehicle, etc. (Consult the manufacturer's recommendations, work package requirements, tank farm engineering, etc.).
Driving Casing Sampling	Moving Equipment	• Only trained personnel shall operate the drive unit. • Personnel working in close proximity to the hydraulic hammer unit shall be briefed on the moving parts and hazards. • Personnel shall make contact with the driller before approaching the drive unit. • Wear hard hat within 15 ft of the HHU when it is in operation.

	Pipe Wrenches	• When pulling/pushing, keep the back as straight as possible. • Use a steady pull/push during removal/installing pipe. • Ensure that wrenches are in good working condition (clean, jaws not worn, etc.) • Only approved equipment may be utilized to make up and break out push tubing. Use of a "cheater" bar is not allowed
	Awkward Posture/Same Position	• Take breaks as needed to avoid muscle strain/fatigue. • When handling tubing do not lift and twist body. • Avoid prolonged still positions.
	Equipment Noise (HHU)	• Post the work area with warning signs that state "hearing protection required when equipment is operating". • Wear hearing protection with a minimum NRR of 18 when the motor(s) on the HHU or portable generators are running. Driving Casing: • Wear ear plugs with a minimum NRR of 30 and ear muffs. • When driving utilizing the HHU, set up a boundary 50 ft. from the drill head. • When driving utilizing the HHU-XL, set up a boundary 100 ft. from the drill head.
	Air Contaminants	• Monitoring to be performed in accordance with RCO-09-004 "C-Farm IH Monitoring Plan", latest revision.
	Unexpected Odor	• Move up wind and contact safety/industrial hygiene and radiological personnel to evaluate.
	Perched Water	• Wear 4 mil nitrile gloves in addition to standard PPE when sampling in perched water or saturated zones.
Decommissioning of the borehole	Bentonite/Silica Sand Dust	• Wash hands and face prior to eating, drinking smoking, applying cosmetics, or using the restroom. • A N100 (particulate type) dust mask may be worn for comfort.
	Mixing and Pouring Cement	• Avoid creating dust when pouring dry material into bucket and when mixing. • Wear safety glasses and impervious gloves. If there is a splash potential, wear additional impervious PPE to prevent skin contact (such as face shield, boots, etc.). • Promptly wash skin that comes in contact with cement powder or wet cement.

Monitoring Requirements:
Radiological and chemical monitoring will be conducted and controlled by WRPS personnel: results will be available from the assigned Radiological Control Technician/Industrial Hygiene Technician.

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HANFORD SITE EMERGENCY SERVICES

Patrol Operations Center - POC (any type of phone) **373-3800**
(contact the POC immediately for fire, injuries, or any type of accident)

Patrol Operations Center (landline only) **911**

EMERGENCY MEDICAL SERVICES

Name	Address	Phone #
Hanford, 200 West	2719 WB	373-2714
Advanced Med	1979 Snyder	376-6981/376-3333
Kadlec Medical Center	888 Swift Blvd	946-4611

ENERGY SOLUTIONS MANAGEMENT

Name	Office Phone #	Cell Phone #
Field Team Lead / Dave Skoglie	375-9591	308-0136
Safety Representative / Rob Zane	375-9585	308-6404
Technical Lead / Kent Reynolds	375-9598	308-3000

TANK FARMS CONTACTS

Name	Office Phone #	Cell Phone #
Tank Farms Shift Manager	372-2806 / 373-3475	
WFO BED	373-2689	
FWS / Bill Clark		539-0949
Harold Sydnor	373-3967	438-1307
Mike Powers (Safety)	376-5597	308-7386

***ENERGYSOLUTIONS* ACTIVITY HAZARD ANALYSIS ACKNOWLEDGEMENT**
AHA-09-007-Rev. 0 WRPS
HYDRAULIC HAMMER UNIT

I have read, understand and agree to abide by the provisions detailed in this Activity Hazard Analysis. I understand that failure to comply with the provisions may lead to disciplinary action and my removal from this job activity.

PRINT NAME	SIGNATURE	EMPLOYEE NO.	DATE

ENERGYSOLUTIONS

Field Safety and Health Inspection Report

Date:	7/22/2010	Time:	0800	Inspected by:	Kris Hutchings
Location:		BY Tank Farm, C Tank Farm			
Work Activities		C Tank Farm--continue sampling activities at # C7676, BY Tank Farm--continue decommissioning and probe installation at #C7817. PNG will continue with gamma logging.			
Weather Conditions		Clear skies, light breeze with gusts predicted by late afternoon, 75°F			

Observations (values are yes, no, N/A=not applicable)

Industrial Hygiene		Industrial Safety					
YES	IH Monitoring/Sampling	YES	Applicable PPE	YES	Heavy Equipment	N/A	Excavations
N/A	Hazard Communication	YES	Walking/Working Surfaces	NO	Elevating Work Platforms	YES	Underground Utilities
N/A	Respiratory Protection	YES	Housekeeping	N/A	Crane and Rigging	YES	Machine Guarding
N/A	Confined Space	N/A	Showers and Eyewash Stations	YES	Vehicular Traffic	YES	Rotating/Moving Equipment
N/A	First Aid/injury/illness	N/A	Electrical	N/A	Fall Hazards	YES	Hand/Power Tools
YES	Heat Stress (WGBT)	N/A	L.O.T.O.	N/A	Falling Objects	YES	Stored Energy
N/A	Ergonomics	NO	Overhead Utilities	N/A	Ladders and Stairs	YES	Pinch Points
N/A	Ventilation/IEQ	YES	Signs and Barricades	N/A	Scaffolds	YES	Applicable Permits
YES	Noise and/or Vibration	N/A	Fire Hazards	YES	Air/Steam/Fluid > 500 psi	YES	Pre-Job Meetings
N/A	Lighting	N/A	Compressed Gas Storage	N/A	Steam/Fluid >200°F	YES	Work Documents
N/A	Other IH	N/A	Exits/Doors/Fire Lanes	N/A	Employee Concern	N/A	Other (Safety)

Observations/Findings/Recommendations/Comments

*Observed tank farm C's morning POD meeting. It appears that there may be some confusion regarding the time the meeting starts—with one group arriving around 0750, another at 0800, and a final group at 0815. The morning POD was conducted by the field work supervisor upon arrival. Observation: the confusion in schedule and the manner of meeting organization fails to address adequately the scope of work, potential hazards, and applicable work permits.

*Observed IH techs setting up WGBT sampling inside C farm. Employees have requested sampling (that is more representative of their work environment be conducted). There also appears to be a misunderstanding of the effectiveness of engineering measures in place to alleviate heat stress in the area--misting units/fans and shading. The WGBT sampling was conducted upwind and away from the engineering measures (sees PIC 1). This placement does not give credit to the effects of the engineering controls. Placement of the WGBT in the immediate work space is recommended.

*Observed the WGBT instrument carried upside down and swinging. This manner of handing may result in an inadequate water supply in the water reservoir for the evaporative wick on the WGBT sampling unit. A dry wick yields an artificially elevated $WGBT_O$ reading (see PIC 2). During observation no additional water was added to the reservoir. Follow up with the IHT is recommended.

*Observed the hearing protection signage for the work area in C Farm. The signage was large and easy to read when viewed head on. However, the signage did not effectively conduct the hazard to surrounding workers who did not see the warnings. The current work area is near other construction sites. The walkway near the area must be kept clear for access and other jobsite workers do not see the hearing protection notice (see PIC 3). Additional posted notices may be needed to better communicate the hazard.

*Observed no fire extinguisher on the generator providing power to the C-Farm sampler's trailer (see PIC 4)

*Observed that the wind flag at BY farm has been replaced according to recommendation

Signature/Date		*Review Signature/Date*	

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Field Safety and Health Inspection Report

PIC 1

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Field Safety and Health Inspection Report

PIC 2

PIC 3

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Field Safety and Health Inspection Report

PIC 4

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Field Safety and Health Inspection Report

Date:	8/17/2010	Time:	0920	Inspected by:	Kris Hutchings
Location:		BY Tank Farm C7820, C7825; Drill Site near C farm C7682			
Work Activites		BY Farm C7820--drilling to sample depth and site cleanup, C7825 decommission hole with bentonite, C farm surface sample collected and site clean up			
Weather Conditions		Clear skies and sunny weather, 78 F, light breeze less than 2 mph			

Observations

Industrial Hygiene		Industrial Safety					
YES	IH Monitoring/Sampling	YES	Applicable PPE	YES	Heavy Equipment	N/A	Excavations
N/A	Hazard Communication	YES	Walking/Working Surfaces	NO	Elevating Work Platforms	YES	Underground Utilities
N/A	Respiratory Protection	YES	Housekeeping	NO	Crane and Rigging	YES	Machine Guarding
N/A	Confined Space	N/A	Showers and Eyewash Stations	YES	Vehicular Traffic	YES	Rotating/Moving Equipment
N/A	First Aid/Injury/Illness	N/A	Electrical	NO	Fall Hazards	YES	Hand/Power Tools
YES	Heat Stress (WGBT)	N/A	L.O.T.O.	NO	Falling Objects	YES	Stored Energy
YES	Ergonomics	YES	Overhead Utilities	NO	Ladders and Stairs	YES	Pinch Points
N/A	Ventilation/IEQ	YES	Signs and Barricades	NO	Scaffolds	YES	Applicable Permits
YES	Noise and/or Vibration	N/A	Fire Hazards	NO	Air/Steam/Fluid > 500 psi	YES	Pre-Job Meetings
N/A	Lighting	YES	Compressed Gas Storage	NO	Steam/Fluid >200°F	YES	Work Documents
N/A	Other IH	N/A	Exits/Doors/Fire Lanes	N/A	Employee Concern	N/A	Other (Safety)

Comments/Items needing addressed

Arrived at BY farm and dressed down in anti contamination clothing to enter the work area. Site C7825 crew was working on the decommissioning of the hole. Workers displayed caution when working around the equipment and were wearing proper PPE. Workers were careful to avoid pinch points and donned hearing protection prior to starting the equipment. Work at site C7820 was waiting on additional support and was on stand by during the visit. The site was clean and well kept. A photo was taken of a box of miscellaneous debris that did not appear to be task related, but rather tank farm house keeping. The crew at site C7682 was working with the samplers to assist as needed with surface samples. They were prepared at 10 am to proceed with sampling at shallow depth, but were on standby waiting for sampler support. The temperature allowed crews to work with built in rest cycles. At time of visit the temperature did not warrant the use of misting fans, the canopy was adequate. See photos on page two for walk through summary

Signature/Date		*Review Signature/Date*	

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Field Safety and Health Inspection Report

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Field Safety and Health Inspection Report

BY Work Crew Site at C7820—Standby mode, debris circled in Red

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Field Safety and Health Inspection Report

Date:	8/26/2010	Time:	0700-1100	Inspected by:	Kris Hutchings		
Location:		C Tank Farm					
Work Activites		Surface samples collected at C7680 by samplers, C7681 monument placed and the drilling rig moved to C7680, general site maintenance.					
Weather Conditions		Mostly clear skies with some clouds, winds 5-15, A.M. predicted high winds P.M.					
Observations							
Industrial Hygiene		Industrial Safety					
YES	IH Monitoring/Sampling	YES	Applicable PPE	YES	Heavy Equipment	N/A	Excavations
N/A	Hazard Communication	YES	Walking/Working Surfaces	NO	Elevating Work Platforms	YES	Underground Utilities
N/A	Respiratory Protection	YES	Housekeeping	NO	Crane and Rigging	YES	Machine Guarding
N/A	Confined Space	N/A	Showers and Eyewash Stations	YES	Vehicular Traffic	YES	Rotating/Moving Equipment
N/A	First Aid/injury/illness	N/A	Electrical	NO	Fall Hazards	YES	Hand/Power Tools
NO	Heat Stress (WGBT)	N/A	L.O.T.O.	NO	Falling Objects	YES	Stored Energy
YES	Ergonomics	YES	Overhead Utilities	NO	Ladders and Stairs	YES	Pinch Points
N/A	Ventilation/IEQ	YES	Signs and Barricades	NO	Scaffolds	YES	Applicable Permits
YES	Noise and/or Vibration	N/A	Fire Hazards	NO	Air/Steam/Fluid > 500 psi	YES	Pre-Job Meetings
N/A	Lighting	YES	Compressed Gas Storage	NO	Steam/Fluid >200°F	YES	Work Documents
N/A	Other IH	N/A	Exits/Doors/Fire Lanes	N/A	Employee Concern	N/A	Other (Safety)

Comments/Items needing addressed

The morning POD covered the project goals for the day: Surface sampling, placing monuments on probe holes, moving the drill unit to C7680 from C7682 and collecting samples at depth. A concern has been raised regarding the proper distance for mandatory hearing protection, they type of protection needed (single vs. double), and when the protection is needed. Additionally a concern was voiced over the potential for sound exposure to working individuals in close proximity to the work site (office trailer). A sound survey will be performed to assess the exposure, and a review of the AHA will clarify the use of project hearing protection. The workers on site worked to quickly and safely re-arrange the work site to prepare for moving the drill equipment. Workers were aware of biological hazards and pointed out the presence of a scorpion and a bull snake under the plastic ground barrier and felt. During the work observation period no unsafe work practices were observed.

Signature/Date		*Review Signature/Date*	

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Sound Survey Summary

Date	08/30/2010	Location	241 C farm project site C7680
Date	09/01/2010	Location	BY West farm project site C7824

Purpose

In response to a concern of sound level exposures exceeding the hearing protection program limits for auditors, observers, and workers a sound pressure level (SPL) survey was taken at two locations. The surveys were taken with a Quest 2700 sound level meter, A weighted fast response.

241 C farm project site C7680 Summary

Equipment Noise (HHU)	• Post the work area with warning signs that state "hearing protection required when equipment is operating". • Wear hearing protection with a minimum NRR of 18 when the motor(s) on the HHU or portable generators are running. Driving Casing: • Wear ear plugs with a minimum NRR of 30 and ear muffs. • When driving utilizing the HHU, set up a boundary 50 ft. from the drill head. • When driving utilizing the HHU-XL, set up a boundary 100 ft. from the drill head.

Figure 1—Detail from project AHA

The AHA was reviewed for the project. At the C7680 site a HHU unit was used for the direct push activities. The location of the site is in close proximity to an active road and an office trailer. The close proximity of the road made the establishment of a 50 foot boundary from the drill head difficult. A boundary was established at the greatest distances feasible—approximately 25 feet—and an administrative control of ceasing work to reduces sound pressure levels (SPL) was implemented.

A recent concern was raised regarding the effectiveness of the boundary and the administrative controls. In response a survey was conducted on 8/30/2010 to determine the SPL at the current boundaries, the SPL inside the office trailer, and the SPL that observers and visitors to the site may be exposed to during a brief visit.

The sound map below demonstrates that the exposure at the current boundary warrants the use of hearing protection. No dosimeters were used for personal sampling; however the levels measured could still pose a hearing risk. For that reason it is recommended that all visitors to the current site utilize hearing protection while the equipment is running. Measurements taken inside the office trailer indicate that while the distance is not greater than 50 feet the trailer walls greatly reduced the sound pressure levels measured.

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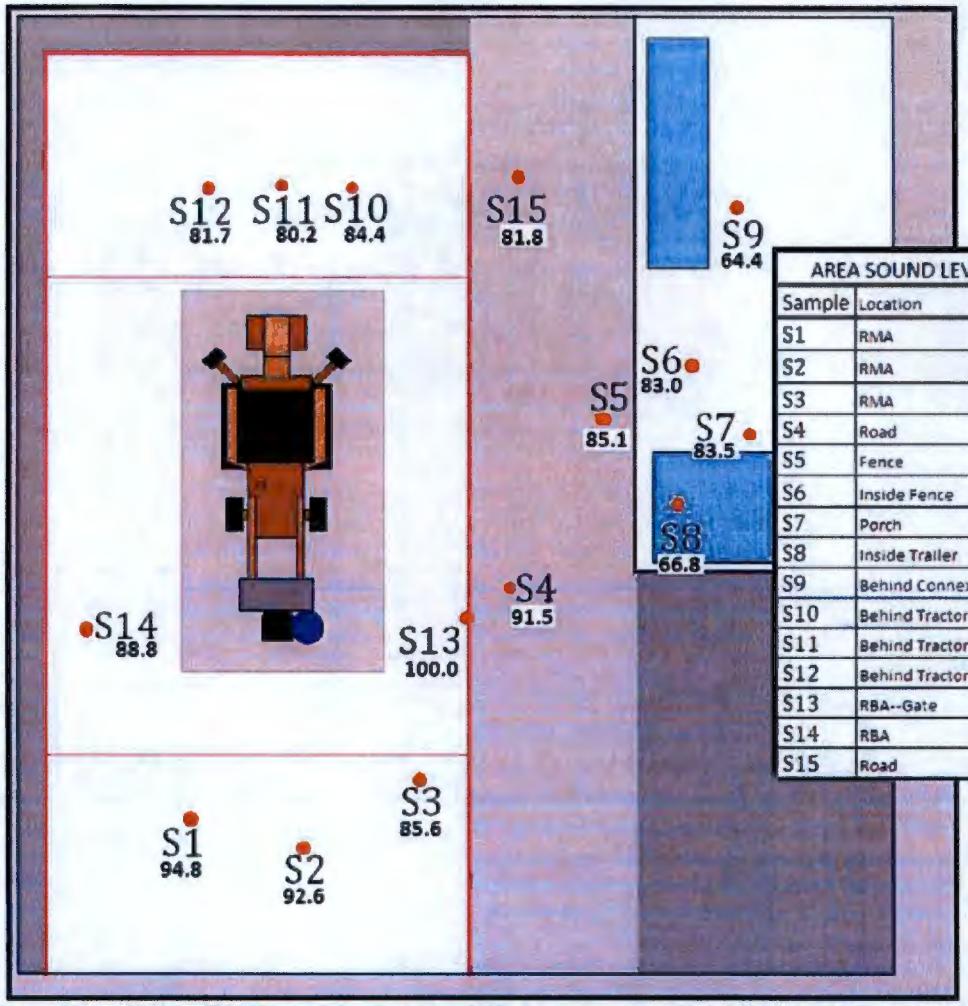

AREA SOUND LEVEL SAMPLING			
Sample	Location	Distance	SPL dBA
S1	RMA	25'	94.8
S2	RMA	25'	92.6
S3	RMA	25'	85.6
S4	Road	25'	91.5
S5	Fence	36'	85.1
S6	Inside Fence	N/A	83.0
S7	Porch	N/A	83.5
S8	Inside Trailer	N/A	66.8
S9	Behind Connex	N/A	64.4
S10	Behind Tractor	25'	84.4
S11	Behind Tractor	25'	80.2
S12	Behind Tractor	25'	81.7
S13	RBA--Gate	10'	100.0
S14	RBA	25'	88.8
S15	Road	30'	81.8

Figure 2—Sound Map of 241 C farm project location C7680. Measurements were taken 08/30/2010 at approximately 0900.

Additionally exposure data was collected for the drillers and any support personnel who may be located less than 5 feet from the drill head during hammering. Measurements indicate the SPL is the greatest when hammering occurs. This data represents a snap shot of actual noise exposures as the SPL varies related to the soil density, the depth of the casing, the speed of hammering, and other adjustments made to the equipment during direct push activities. Please refer to figure 3.

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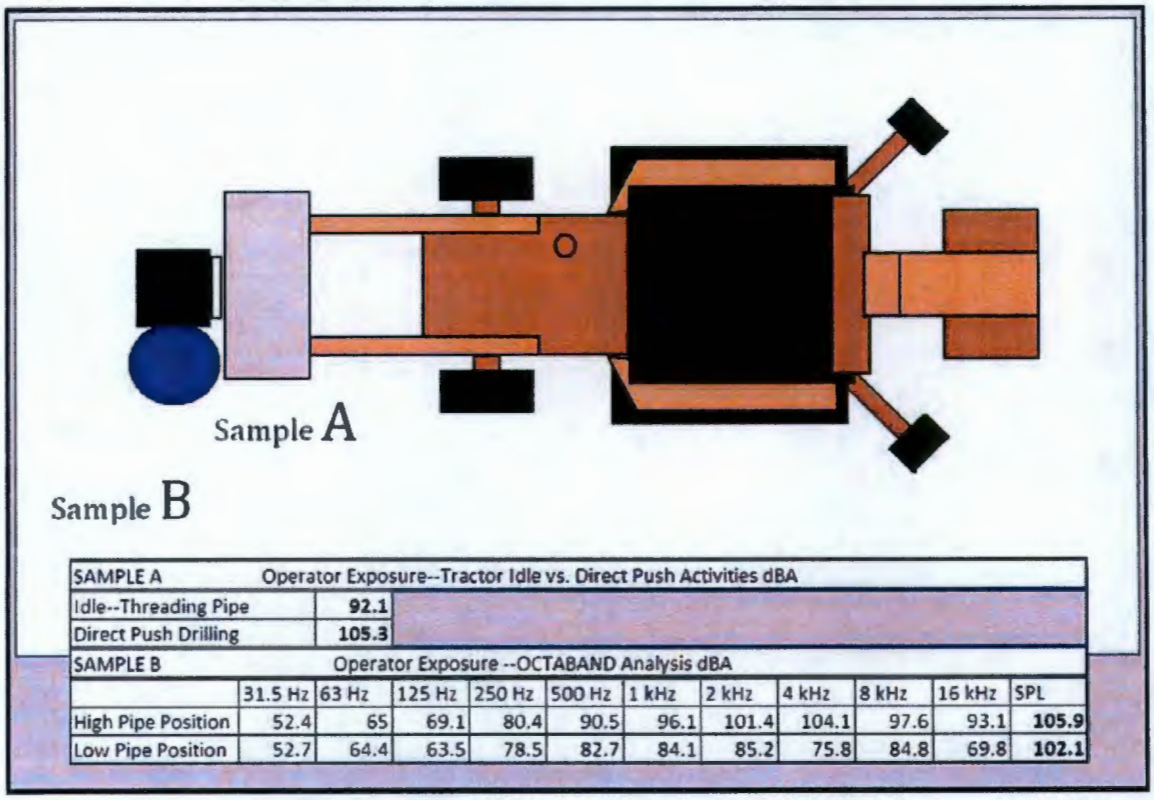

SAMPLE A	Operator Exposure--Tractor Idle vs. Direct Push Activities dBA										
Idle--Threading Pipe		92.1									
Direct Push Drilling		105.3									
SAMPLE B	Operator Exposure --OCTABAND Analysis dBA										
	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz	SPL
High Pipe Position	52.4	65	69.1	80.4	90.5	96.1	101.4	104.1	97.6	93.1	**105.9**
Low Pipe Position	52.7	64.4	63.5	78.5	82.7	84.1	85.2	75.8	84.8	69.8	**102.1**

Figure 3—Sample taken during direct push activities. This data represents the exposure for the drill operators and any support personnel that are less than 5 feet from the unit during hammering

BY West farm project site C7824

The project in BY West evaluated was located at C7824. This unit is covered under the AHA (see figure 1) as an HHU-XL which requires a boundary of 100'. Because of the topography of the farm and the remote nature of the work, a smaller boundary was established and hearing protection was worn by all workers near the equipment.

The HHU-XL unit has a much lower operating SPL of 78.1 dBA measured at the drill operators station. However while hammering the unit has a much higher SPL as seen in its sound map (see figure 4). The boundary measurements confirm that this unit requires a greater boundary than HHU units. At this site, administrative controls compensated for smaller roped boundaries. It is recommended that all individuals at the site during drilling activities wear hearing protection. It is also recommended that exposure be minimized by distancing personnel not immediately needed for the hammering activities.

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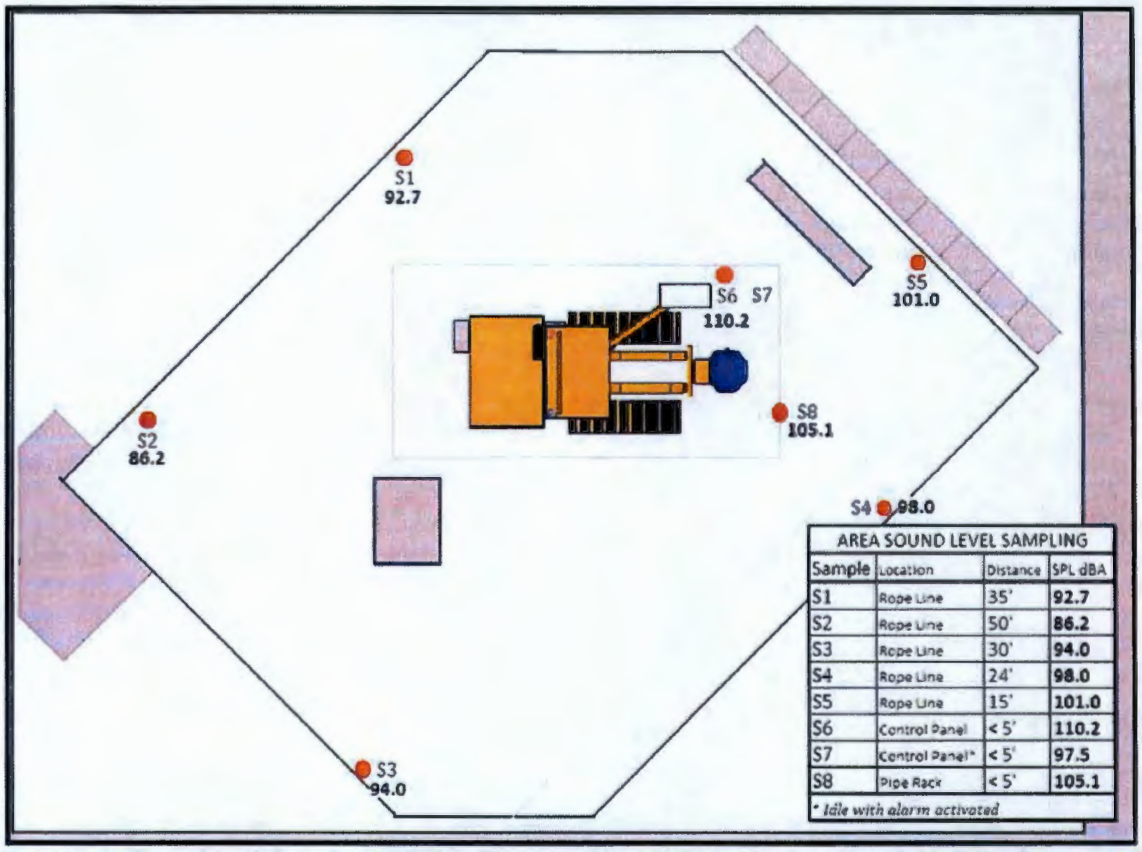

AREA SOUND LEVEL SAMPLING			
Sample	Location	Distance	SPL dBA
S1	Rope Line	35'	**92.7**
S2	Rope Line	50'	**86.2**
S3	Rope Line	30'	**94.0**
S4	Rope Line	24'	**98.0**
S5	Rope Line	15'	**101.0**
S6	Control Panel	< 5'	**110.2**
S7	Control Panel*	< 5'	**97.5**
S8	Pipe Rack	< 5'	**105.1**

** Idle with alarm activated*

Figure 4—BY West project site located at C7824. Sampling was conducted 09/01/2010 at approximately 1000. The drillers and all support were wearing single hearing protection while the equipment was at idle. Those inside the boundary wore double hearing protection during hammering.