Tri-Party Agreement

Change Notice for Modifying Approved Documents/ Work Plans In Accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records*

0081525

Change Number	Document Submitted Under Tri-Party Agreement Milestone	Date:
TPA-CN-264	N/A	April , 2009

Document Number and Title:
DOE/RL-96-22, Rev. 4, *100 Area Remedial Action Sampling and Analysis Plan*

Date Document Last Issued:
November 2004

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Description of Change: CHPRC will implement their own comparable programs, procedures, plans, and work instructions for this sampling and analysis plan instead of the Washington Closure programs, procedures, plans, and work instructions referenced.

This change modifies an approved work plan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records*, and not Chapter 12.0, *Changes to the Agreement.*

DOE/RL-96-22 lists the following procedures which are internal to the Washington Closure contractor.

- BHI-01435, Rev. 0, *Data Validation Procedure for Chemical Analysis*
- BHI-01433, Rev. 0, *Data Validation Procedure for Radiochemical Analysis*
- BHI-EE-01, *Environmental Investigations Procedures*
- BHI-EE-10, *Waste Management Plan*
- BHI-HR-02, *ERC Training Procedures*
- BHI-MA-02, *ERC Project Procedures*
- BHI-QA-03, *ERC Quality Assurance Program Plans*

The CHPRC also has comparable programs, procedures, plans, and work instructions in place, although some are developed as needed (e.g., site-specific health and safety plans) to address these same areas and actions and will utilize their internal programs, procedures, plans, and work instructions in their implementation of DOE/RL-96-22 *100 Area Remedial Action Sampling and Analysis Plan* .

See attached redline/strikeout which describes what CHPRC is implementing (rather than referencing contractor procedures).

Justification and Impacts of Change: Clarification of Washington Closure internal procedure use verses CHPRC internal procedures, which will be used when implementing DOE/RL-96-22, *100 Area Remedial Action Sampling and Analysis Plan.*

Approvals:

RL Unit Manager	5/6/09 Date	✓ Approved	___ Disapproved
EPA Unit Manager	5/6/09 Date	✓ Approved	___ Disapproved
Ecology Unit Manager	___ Date	___ Approved	___ Disapproved

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II.2.6 SPECIAL TRAINING REQUIREMENTS/CERTIFICATION

~~Training or certification requirements needed by personnel are described in BHI-HR-02, *ERC Training Procedures*.~~ Field personnel shall have completed the following mandatory training (as required) before starting work:

- Occupational Safety and Health Administration 40-Hour Hazardous Waste Worker Training
- Radiation Worker Training
- Hanford General Employee Training.

~~Personnel conducting sampling, radiological surveys, and chemical field screening shall meet additional training and certification requirements as specified in BHI-QA-03, *ERC Quality Assurance Program Plans*, which include the following:~~

- ~~Section 5.1, "Field Sampling Quality Assurance Program Plan," for sampling personnel~~
- ~~Section 5.2, "Onsite Measurements Quality Assurance Program Plan," for personnel conducting chemical field-screening~~
- ~~Section 5.3, "Environmental Radiological Measurements Quality Assurance," for personnel conducting radiological survey measurements.~~

II.4.2 REPORTS TO MANAGEMENT

Corrective action required as a result of surveillance reports, nonconformance reports, or audit activities will be documented and dispositioned according to the contractor's corrective action program ~~as required by BHI-MA-02, *ERC Project Procedures*, Section 2.1, "Corrective Action Request (CAR).".~~ Other measurement systems, procedures, or plan corrections required as a result of routine review processes will be resolved by governing procedures or will be referred to the technical lead for resolution. Findings from audits, surveillance, and assessments will be transmitted to the project manager and the current contractor's QA department for program-related tracking and trending. Otherwise, the routine evaluation of data quality described throughout this section will be documented and filed with the data in the project file. ~~Other measurement systems, procedures, or plan corrections that may be required as a result of routine review processes will be resolved, as required, by governing procedures.~~

II.5 DATA VALIDATION AND USABILITY

II.5.1 DATA REVIEW, VALIDATION, AND VERIFICATION REQUIREMENTS

Completed data packages will be validated by qualified primary contractor Sample and Data Management personnel or by a qualified independent contractor. Validation will consist of verifying required deliverables, requested versus reported analyses, and transcription errors. Validation also will include evaluating and qualifying the results based on holding times, method blanks, laboratory control samples, laboratory duplicates, and chemical and tracer recoveries, as appropriate. No other validation or calculation checks will be performed.

Level C data validation as defined in the contractor's validation procedures, which are based on EPA functional guidelines (e.g., Bleyler 1988a, *Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses*; Bleyler 1988b, *Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses*), will be performed for a minimum of 5 percent of the data by matrix and analyte group. Analyte group refers to radionuclides, semivolatiles, PCBs, metals, etc. The goal is to cover the various analyte groups and matrices during the validation.

When outliers or questionable results are identified in the data quality assessment, additional data validation will be performed. The additional validation will be up to 5 percent of the statistical outliers and/or questionable data. The additional validation will begin with Level C and may increase to Levels D and E as needed to ensure that the data are usable. Note that Level C validation is a review of the QC data, while Levels D and E include review of calibration data and calculations of representative samples from the dataset. All data validation will be documented in data validation reports. An example of questionable data is the positive detections greater than the practical quantitation limit or reporting limit in soil from a reference site that should not have exhibited contamination. Similarly, results below background would not be expected and could trigger a validation inquiry. With the exception of "R" qualified or rejected data, all data will be used.

At least one data validation package will be generated. Validation requirements identified in this section are consistent with Level C validation, as defined in data validation procedures. Relative to analytical data in sample media, physical data and/or field screening results are of lesser importance in making inferences of risk. Because of the secondary importance of such data, no validation for physical property data and/or field screening results will be performed. However, field QA/QC will be reviewed to ensure that the data are useable. Field instrumentation, calibration, and QA checks will be performed in accordance with the following.

- Calibration of radiological field instruments on the Hanford Site is performed under contract by Pacific Northwest National Laboratory, as specified in their program documentation.

- Daily calibration checks will be performed and documented for each instrument used to characterize areas that are under investigation. These checks will be made on standard materials that are sufficiently like the matrix under consideration that direct comparison of data can be made. Analysis times will be sufficient to establish detection efficiency and resolution.

The approval of field-data collection plans by the Radiological Controls organization represents the data validation and usability review for handheld field radiological measurements.
For the use of hand-held global positioning systems (GPS), auto-calibration is based on satellite positioning and manufacturer's instructions. GPS field instrumentation will comply with the National Marine Electronic Association standards, and will be accurate to within one foot of each excavated area.

~~For SFL analyses, a minimum of 5% of the data packages will be validated. All coordination of validation services, execution of data validation activities, and handling/storage of deliverables will be in accordance with BHI-EE-01, *Environmental Investigations Procedures*, Section 2.5, "Data Package Validation Process."~~

~~Data validation will be in accordance with *Data Validation Procedure for Radiochemical Analysis* (BHI 2000b) and *Data Validation Procedure for Chemical Analysis* (BHI 2000a). Onsite and QTL data reviews will be according to method requirements. The validated data qualifier results shall be entered into the HEIS database.~~

~~Onsite measurements and QTL analysis data will not undergo a formal validation. The QA/QC processes used in SOPs will be followed to ensure useable data. These include the use of blanks, duplicates, splits, and measurement of known standards. The data will be reviewed by analytical personnel and the project team.~~

III. 3 SAMPLING METHODS

Sampling methods for radioactive liquid effluent waste sites are shown in Table III-1. ~~Sampling will follow SOPs per BHI-EE-01.~~ Further detail will be provided in ~~the Instruction Guide (BHI 2003b).~~ EPA/240/R-02/005, *Guidance on Choosing a Sampling Design for Environmental Data Collection* (EPA 2002) and SW-846 Methods.

Sampling methods are site specific for the remaining sites and will be documented in site specific work instructions.

III.5 SAMPLE MANAGEMENT

This section applies to both radioactive liquid effluent waste sites and the remaining sites.

III.5.1 SAMPLE CUSTODY

III.5.1.1 Field Custody

~~All samples obtained during the course of this project will be controlled from the point of origin to the analytical laboratory as required by BHI-EE-01, Procedure 3.0, "Chain of Custody."~~
A chain-of-custody record will be initiated at the time of sampling and will accompany each set of samples shipped to the laboratory. The analyses requested for each sample will be indicated on the accompanying Chain-of-Custody/Sample Analysis Request form. Chain-of-custody procedures will be followed throughout sample collection, transfer, analysis, and disposal to ensure that sample integrity is maintained. Each time responsibility for custody of the sample changes, the new and previous custodians will sign the record and note the date and time. The sampler will make a copy of the signed record before the sample is shipped and will transmit it to the environmental information system and data management group within 24 hours of shipping.

A custody seal (i.e., evidence tape) will be affixed to the lid of each sample jar or to the outer packaging as appropriate in a manner that would indicate if tampering occurred. The seal will be inscribed with the sampler's initials and the date sealed.

III.5.2 SAMPLE PRESERVATION, CONTAINERS, AND HOLDING TIMES

~~Sample preservation and container details will be addressed in the sample authorization form in accordance with BHI-EE-01, Procedure 2.0, "Sample Event Coordination."~~
Sample volumes and bottle types depend on the laboratory and analytical methods used. Sample preservation, container types and sizes, analytical methods, and holding time requirements for the analysis to be performed will be established and documented in the project-specific SAFs ." Bottle types, preservation, and holding times are based wherever possible on established protocols (e.g., EPA SW-846) and/or industry standard practices. The allowable holding times will be identified on the SAF for unique sample events if holding times cannot be met. The reason for not meeting the holding times shall be documented in the field logbook or in the data package from the laboratory.

III.5.3 SAMPLE SHIPPING

~~Sample packaging and shipping will be performed in accordance with BHI-EE-01, Procedure 3.1, "Sample Packaging and Shipping."~~
A radiological control technician will survey each sample jar to verify that the container is free of smearable surface contamination. The radiological control technician also will measure the radiological activity on the outside of the sample container (through the container) and will mark

the container with the highest contact radiological reading in millirem per hour. Activity level determinations will be made by utilizing dose rates, and ratioed against a bounding isotopic distribution, or transported in accordance with provisions in an approved sample routine radiological shipping record. This information, along with other data that may prequalify the samples, will be used to select proper packaging, marking, labeling, and shipping paperwork in accordance with U.S. Department of Transportation regulations (49 CFR, "Transportation") and to verify that the sample can be received by the offsite analytical laboratory. The sampler will send copies of the shipping documentation to the environmental information system and data management group within 24 hours of shipping.

As a general rule, samples will be sent to the Waste Sampling and Characterization Facility. Samples with activities less than 1 mR/h may be shipped to an offsite laboratory. Samples with activities between 1 and 10 mR/h also may be shipped to an offsite laboratory, but must first be evaluated by the environmental information system and data management group. Samples with activities greater than 10 mR/h will be sent to an onsite laboratory arranged by the environmental information system and data management group.

III.5.4 FIELD DOCUMENTATION

~~All relevant documents, records, reports, logs, field notebooks, pictures, subcontract reports, and analytical reports will be submitted, secured, and stored in accordance with BHI-MA-02.~~
All information pertinent to field sampling and analysis will be recorded in logbooks in accordance with SW-846. The sampling team will be responsible for recording all relevant sampling information. Entries made in the logbook will be dated and signed by the individual who made the entry.

III.5.5 SAMPLE WASTE MANAGEMENT

Waste generated by sampling activities will be managed in accordance with DOE/RL-96-17, *Remedial Design Report/Remedial Action Work Plan for the 100 Area*~~BHI-EE-10~~, Section 4.0, *Waste Management ~~Plan~~*, and the site-specific waste packaging and labeling ~~management~~ instruction. Unused samples and associated laboratory waste for the analysis will be dispositioned in accordance with the laboratory contract and agreements for return to the Hanford Site. Pursuant to 40 CFR 300.440(a)(5), Remedial Action project manager approval is required before returning unused samples or waste from offsite laboratories.

Approval of this SAP constitutes Remedial Action project manager approval for shipment of offsite and onsite laboratory sample waste back to the waste site or origin.