

BASIC ORDERING AGREEMENT
ATTACHMENT 1

STATEMENT
OF
WORK

LABORATORY
ANALYTICAL
SERVICES

STATEMENT OF WORK LABORATORY ANALYTICAL SERVICES

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1.0 GENERAL

1.1 Scope

- 1.1.1** Prime or other authorized subcontractors to the Department of Energy (termed "Contractor" in this document) are seeking proposals from analytical laboratories to perform quality chemical analyses on soil, sediment, groundwater, water, etc. samples. Organic, inorganic, and radiochemical analytical services and physical parameter measurements are required. Compliance with environmental regulations requires detailed constituent monitoring. The scope of this document is to identify the default performance criteria and data deliverable requirements from analytical laboratories providing services to these prime and subcontractors for routine laboratory analytical services.
- 1.1.2** Prompt definitive chemical analyses of samples are imperative to meet strict reporting deadlines enforced by federal and state environmental laws and regulations using SW846 methodology, when possible. Chemical data provided shall be such that the Contractor can validate to EPA "definitive" level data. Some samples may contain hazardous substances and/or low levels of radioactivity. Any and all data and documentation generated as a result of this procurement may be subjected to regulatory and public scrutiny. Multiple laboratories are needed to perform these analyses within the stated time constraints without compromising the quality of the results. Samples may originate from groundwaters, surface waters, waste streams, processes, biota uptake, personnel health and safety, and research efforts.

1.2 Purpose

- 1.2.1** Contractors are responsible for the collection and distribution of analytical information at their sites. This can include information from samples on soil, sediment, rock, groundwater, surface water, solids, fuel, oil, coal, sludges, ash and other materials in the areas of industrial hygiene, bioassay, toxicity testing, air and stack monitoring, drinking water, fauna, biota, waste materials, filters, and air.
- 1.2.2** Methods considered "routine" are listed in Attachment B, Analyte List. The versions of the methods will be in accordance with the most recently promulgated versions of the methods of the state or Environmental Protection Agency (EPA) region that has primacy over the environmental activity. Older versions of these methods can be implemented at the request of the Contractor. There may be methods other than those listed in Attachment 1-B, Analyte List, which may be considered as Special Analytical Services. Additional instructions for these Special Analytical Services, will be included in site specific contracts via Contracts, Task Orders, Laboratory Delivery Orders, etc. written against the Basic Order Agreement (BOA).

1.2.3 In this document, the words “shall” and “must” are used to denote a requirement; the word “should” is used to denote a recommendation; and the word “may” is used to denote permission, neither a requirement nor a recommendation.

1.3 Implementation of requirements

Site specific contracts will be written by each Contractor against the BOA via Contracts, Task Orders, Laboratory Delivery Orders, etc.. These will cover either a discrete number of samples or a financial limit, and period of performance; and will indicate whether the specifics of this document will be required or whether alternative methodologies or deliverables will be required.

1.3.1 Exceptions to Requirements Contained in this SOW

1.3.1.1 By the Contractor - identified during analytical planning

Exceptions to requirements initiated by the Contractor will be made in site specific contracts via Contracts, Task Orders, Laboratory Delivery Orders, etc. written against the BOA.

1.3.1.2 By the Laboratory - identified immediately prior to or during analyses, or prior to accepting task orders, delivery orders, or etc.

Exceptions to requirements initiated by the laboratory must involve consultation with the client Contractor and must be documented in the laboratory case narrative of each data package.

1.3.2 Exceptions to Recommendations

Exceptions to recommendations need only be documented in the laboratory case narrative when those recommendations are denoted “as appropriate” in this document. Exceptions to all other recommendations do not need to be documented in the laboratory case narrative.

1.4 General Description of the Service

The price per analysis proposed by the laboratory should reflect:

- all costs associated with sample logistics (including bottles and labels, if requested by the Contractor)
- shipment of supplies and samples (if requested by the Contractor),
- sample handling, treatment, preparation, extraction, analyses (including quality control samples)
- quality assurance, quality control
- clean-up, storage, and disposal requirements
- reporting of the results (including use of Electronic Data Deliverables),
- document filing and archiving

Items not reflected as cost per analysis include financial reporting and copying and shipping of raw project data to the Contractor.

1.4.1 Services to Be Included

1.4.1.1 This specification solicits logistical and analytical laboratory support to the Contractors for the characterization of environmental and other types of samples using standard EPA-accepted protocols and methods when available. Samples may contain hazardous constituents and/or low levels of radioactivity.

1.4.1.2 Analytical services shall include the following:

- Maintaining and returning original sample chains of custody;
- Handling and storage of samples in compliance with all state and federal guidelines and regulations;
- Participating in Contractor, EPA, and DOE quality assurance programs;
- Analysis of the samples (for physical parameters and organic, inorganic, and radiochemical constituents) within the designated EPA holding times for that constituent, requested turn-around-times, or within specified turnaround times per each release order (whichever is less);
- Hard copy and electronic transmittal of both analytical results and invoices in required formats;
- Proper legal management and disposal of sample residual and extracts;
- Provide the originating Contractor a record of disposal of sample residuals per Contractor specifications
- Retention of all documents for a period of five years, within the requirements of the QA Program as detailed in QSAS (Attachment 1-A). After the 5 years the laboratory shall check with the Contractor for written permission for disposition.

1.4.2 Responsibility for Materials and Services

1.4.2.1 All samples will be collected by Contractor personnel or subcontractors. Sample sizes provided by the Contractor shall be at least the laboratory-specified minimum, when possible. Samples will be initially screened for radioactivity levels by the Contractor or the level of radioactivity will be based on process knowledge prior to sample shipment. Contractors will identify and promptly notify the laboratory of the results for those samples showing elevated radioactivity levels or provide historical knowledge of potential radioactivity for the samples not suspected of having significant levels of radioactivity. Sample vials and containers will be marked as radioactive if above Department Of Transportation (DOT) radioactive shipping limits; or if the samples are from suspected radioactive areas, as required by the Price Anderson Act Amendments.

1.4.2.2 The analytical laboratory shall furnish everything necessary for the performance of work in accordance with the

requirements of this specification. (See section 5.0 for the use of sub-tier laboratories or other subcontractors.)

- 1.4.2.3** The laboratory is expected to keep current with the changing dynamics of the environmental analytical services industry. As new analytical technologies, methods, regulatory acts, and certification or intercomparison programs are developed and issued, the Contractor may, solely at its discretion, include them as requirements in a revision to this specification. In addition, the laboratory is encouraged to notify the Technical Representative (TR) or other designated technical agreement administrator of new or improved methodologies and/or capabilities which it obtains throughout the subcontract agreement period. Laboratory suggested services will be evaluated by the Contractor and considered for incorporation into this agreement.

2.0 REFERENCES

2.1 Glossary and Abbreviations

See Section 3 of Attachment 1-A “Quality Systems for Analytical Services” (QSAS) for definitions and acronyms.

2.2 Codes, Standards, Orders, and Regulations

See Section 2 of Attachment 1-A “Quality Systems for Analytical Services” (QSAS) for listing of codes, standards, orders and regulations

- 2.2.1** The laboratory shall have, for the duration of the agreement, all applicable state and federal licenses and/or certifications necessary for operation of the analytical facilities to meet this specification and the site specific requirements. Failure to secure or maintain applicable licenses and/or certifications shall constitute grounds for refusal to award or for termination of the agreement.
- 2.2.2** Laboratories that use, store and/or dispose of radioactive materials must have and maintain a current Nuclear Regulatory Commission (NRC) or Agreement State license. The laboratory must maintain the appropriate NRC or state licenses having a possession limit for samples containing a mixture of radionuclides, including tritium or transuranics, that the state or the NRC defines as radioactive materials. The license shall ensure that such materials can be received and properly disposed.
- 2.2.3** The laboratory shall provide transportation and shipping of materials in accordance with all state and federal regulations. As a minimum, the laboratory shall follow Department of Transportation (DOT) regulations, as specified in the most current revision of 49CFR100-180 and 49CFR383-389.
- 2.2.4** The laboratory shall have the ability to perform the contracted organic, inorganic, radiological, and other specified analyses, as well as physical parameters, according to applicable EPA or other

standard protocols and methods. The laboratory shall have current copies of the documents available for audit at the laboratory. The laboratory shall be responsible for obtaining future updates of these documents. Contractors will supply the required documents specific to their site(s). Current revisions or editions of the referenced documents shall be used to conduct unmodified standard methods analyses.

2.2.5 Any specific site procedure required by a Contractor will be identified in site specific contracts via Contracts, Task Orders, Laboratory Delivery Orders, etc. written against the BOA. Such procedures will be provided by the Contractor.

2.2.6 The laboratory shall have an industrial hygiene/chemical hygiene plan and a radiation safety plan which meets and implements all laboratory safety requirements outlined by the Occupational Safety and Health Administration (OSHA) in the most current revision of 29CFR1910.1450, "Occupational Exposures to Hazardous Chemicals in Laboratories." A stringent health and safety plan that addresses hazardous and radioactive materials is required during performance of this agreement. The laboratory is expected to follow the applicable "Good Laboratory Practice Standards" specified in the most current revision of 40CFR792 during performance of work under this agreement.

3.0 WORK REQUIREMENTS

3.1 Technical Requirements

The technical requirements contained in this section are generic requirements for all Contractors. Contractors that have specific needs/requirements will identify these specifics in their site specific contracts via Contracts, Task Orders, Laboratory Delivery Orders, etc. written against the BOA.

3.1.1 Sample Requirements

3.1.1.1 Sample Size and Number of Containers

3.1.1.1.1 The laboratory shall assist the Contractor in minimizing sample size (mass or volume) and the number of sample containers necessary to perform the requested analyses. Sample sizes provided by the Contractor shall be at least the protocol-specified minimum.

3.1.1.1.2 The laboratory shall submit a summary table (hard copy and diskette or FTP/email attachment submittal) of minimum field sample size requirements for each package of analyses listed in Attachment K, Analyte List, or other rational grouping. This summary table shall be submitted to the TR or authorized technical representative within 30 calendar days of agreement award and within 15 calendar days of any revision or update.

3.1.1.2 Collection, Packaging and Shipment of Samples

- 3.1.1.2.1 The Laboratory is not required to provide any materials or incur any expenses associated with the collection, packaging, or preparation of samples for shipment to the Laboratory; unless otherwise specified in site specific contracts via Contracts, Task Orders, Laboratory Delivery Orders, etc. written against the BOA. This includes costs associated with:
- Sample bottles/containers
 - Sample bottle/container labels
 - Field preservatives
 - Shipping containers (including coolers)
 - Shipping materials
 - Shipping labels
- 3.1.1.2.2 The Contractor shall notify the laboratory of a pending sample shipment, including a reference to the purchase order, number of samples, and any pertinent information not included in the purchase order. The laboratory shall receive an estimated radiological activity report for a shipment of samples with suspect radiological content and the Contractor may require, at its discretion, a permission to ship notice from the Laboratory.
- 3.1.1.2.3 The lab may, at their discretion, refuse to accept a sample shipment. This refusal must be made prior to shipment and may be verbal, but must be documented in writing.
- 3.1.1.2.4 Samples will be shipped to the Laboratory at the Contractor's expense, unless otherwise specified in site specific contracts via Contracts, Task Orders, Laboratory Delivery Orders, etc. written against the BOA.. Verification of sample receipt by the Laboratory will be communicated to the Contractor's Representative/Designee as soon as possible, unless otherwise specified in site specific contracts written against the BOA.
- 3.1.1.2.5 If the laboratory receives any sample that is out of specified temperature limits, the laboratory shall immediately stop all work with that sample and call the TR or authorized technical representative for instructions for proceeding with, or cancellation of, analyses for that sample.
- 3.1.1.2.6 The Laboratory shall return, at Laboratory's expense, all coolers to the owner within 30 calendar days, unless otherwise specified in site specific contracts via Contracts, Task Orders, Laboratory Delivery Orders, etc. written against the BOA..
- 3.1.1.2.7 An example of a Contractor's COC will be provided as part of the site specific contracts written against the BOA.

3.1.1.3 Sample Characteristics

Unless specifically precluded because of prior process knowledge, samples will be initially screened for radioactivity levels by the Contractor prior to sample shipment. The Contractor will identify and notify the laboratory of those samples showing elevated radioactivity levels, provide a copy of available radiological data, and coordinate shipments. The samples may have highly elevated dissolved solids, total suspended solids and/or tritium, radioactive materials, PCBs and other possible hazardous constituents which the laboratory must be equipped to receive and handle correctly.

3.1.1.4 Sample Disposition and Waste Return

- 3.1.1.4.1 Unless otherwise specified by site specific contracts written against the BOA, unused sample portions shall be maintained in accordance with current applicable EPA requirements for a minimum period of 60 calendar days (maximum - 75 calendar days) after receipt of the analytical results by the Contractor. This unused sample portion allows for a possible sample rerun, if needed.
- 3.1.1.4.2 Unless specifically agreed to at the time of sample shipment, the Laboratory assumes ownership of all samples sent to it by the Contractor for analysis. The Laboratory shall be responsible for proper disposal of all sample residuals and secondary waste, in accordance with 40 CFR, Parts 260-271 and 761, 49 CFR Parts 171-180, and all applicable federal, state and local statutes, regulations, ordinances, orders and rules. The Laboratory shall be the generator responsible for designating, manifesting and disposing of the samples and secondary laboratory waste. Disposal shall be appropriately documented (e.g. Chain of Custody, disposal report) and a copy made available upon specific request by the Contractor.
- 3.1.1.4.3 The Laboratory shall notify the Contractor, in writing, of its schedule for disposal of residuals of such samples. In the event the Laboratory cannot lawfully dispose of a specific residual sample and/or secondary waste, and with prior written approval, the Contractor shall take custody of the sample from Laboratory and arrange for its proper disposal.
- 3.1.1.4.4 The Laboratory shall maintain all waste disposal records as required by applicable federal, state and local laws. The Laboratory shall maintain an auditable file system. The file system may be verified during facility assessments.
- 3.1.1.4.5 All transportation of wastes en route to final disposal shall be performed in compliance with then-current promulgated US Department of Transportation regulations (49 CFR, Parts 171-180).

3.1.2 Analysis

3.1.2.1 Laboratory Requirements

See Attachment 1-A (QSAS) for detailed Laboratory QA requirements.

3.1.2.2 Analytical Requirements

See Attachment D to the QSAS (Attachment 1-A) for specific analytical requirements.

3.1.2.2.1 The laboratory shall analyze for the constituents or analytical packages as listed in Attachment 1-B, Analyte List, which includes a complete listing of methods, suites, subsuites and analytes. Included in this attachment are individual sections for:

- Volatile Organic Analyses (VOA)
- Semi-Volatile Organic Analyses (SVOA)
- Pesticides/PCB's
- Dioxins/Furans
- Herbicides
- Metals
- Wet Chemistry
- Universal treatment Standard List (UTS)
- Alpha Spectroscopy
- Gamma Spectroscopy
- Liquid Scintillation (LSC)
- Kinetic Phosphorescence Analysis (KPA)
- Miscellaneous and special analyses

3.1.2.2.2 The laboratory shall be required to maintain method detection limits (MDL) and estimated quantitation limits (EQL) below the Required Detection Limit (RDL) for each analyte/compound in the analyte list.

3.1.2.2.3 The required analytical constituents and RDLs are listed in Attachment 1-B, Analyte List, along with the suggested analytical method(s). The laboratory may propose alternate methods to the Contractor, but the Contractor must approve the alternate method before considered as an acceptable method. If the laboratory cannot meet the RDL in the Analyte List, then the laboratory should propose for the Contractor's review and acceptance the MDLs they can achieve. The laboratory shall report Tentatively Identified Compounds (TIC), if requested, for volatiles and semivolatiles.

3.1.2.2.4 A metals method detection limits (MDL) study using a simulated soil matrix shall be performed and submitted with the other MDL studies. Any

additional costs for this study shall be reflected in the unit prices for metals analyses.

3.1.2.3 Analytical Holding Times

- 3.1.2.3.1 The laboratory shall analyze the sample for the required constituents within the designated EPA holding times.
- 3.1.2.3.2 The site-specific contracts will specify the time in which the contractor agrees to get the sample to the lab prior to the end of the hold time. If the timeframe is not met, the sample becomes an accelerated analysis or prep as defined by the hold time. The laboratory shall notify the contractor in writing when this occurs.
- 3.1.2.3.3 For organics, as required by specific EPA methods or requirements, storage between the time of extraction and concentration shall be at 4°C. This requirement may be modified in site specific contracts written against the BOA. Storage for metals following digestion may be at room temperature.
- 3.1.2.3.4 Medium- or high-concentration volatile organics shall not be held following extraction; their analysis must take place immediately after extraction. Volatile organics are to be analyzed by the low-level method unless the concentration criteria listed for medium- or high-concentration analysis in the requested method are met.
- 3.1.2.3.5 Holding time ends when the analysis, resulting in reported data, has been initiated (i.e., semi-volatile GC/MS extract is injected into the last instrumentation). If the final reported data results from a dilution or re-injection of the sample, this analysis must have been completed within the holding time.

3.1.2.4 Contract Required Detection Limits

- 3.1.2.4.1 Contract Required Detection Limits (CRDLs), also referred to as Required Detection Limits (RDLs), are defined as a contractually specified detection limit that, under typical analytical circumstances, should be achievable
- 3.1.2.4.2 The reporting limit of all sample results shall be equal to or less than the RDLs specified in Attachment 1-B, Analyte List, including all analytical samples and quality indicator samples.
- 3.1.2.4.3 Radiochemistry Limits
 - The Minimum requirement for radiochemistry detection are defined in the QSAS (Attachment 1-A)
 - All reported quantities, including but not limited to results, total unpropagated uncertainty and minimum

detectable activity shall be reported to three digits in scientific notation.

3.1.2.5 Sample Reruns

The laboratory shall repeat (rerun) analysis when requested by the TR or authorized technical representative on the preserved original unused sample portions or on unused portions of sample preparations (e.g., extracts/digests) if adequate amounts are available and within holding times. The completed data package, including the electronic deliverable, must be received by the Contractor within the schedule outlined for original sample shipment, starting from the date of the written rerun request.

3.1.2.6 Dilution

See QSAS (Attachment 1-A) for minimum dilution requirements.

If a sample contains multiple off scale analytes or is still off scale after dilution, the TR or authorized technical representative shall be contacted for guidance.

3.1.2.7 Expedited Analyses

3.1.2.7.1 The laboratory shall have the ability to handle expedited analyses (rush service). Only those samples specifically marked and accompanied by a written request from the Contractor's designee for rush service will be treated as rush samples. Such notice will state the number of samples required, types of analyses, and the required turnaround time.

3.1.2.7.2 The Contractor may desire to 'rush' samples already in the Laboratory's possession. In these cases the Contractor's designee will fax or e-mail a request stating the number of samples required, types of analyses, and the required turnaround time.

3.1.2.7.3 The lab may, at their discretion, refuse to accept a 'rush' request. This refusal may be verbal, but must be documented in writing. This refusal must be performed in a timely manner; within one (1) hour of receipt of the request.

3.1.2.7.4 Rush request samples shall be completed and the complete data package (in the specified data format) reported before the rush service period expires, if the analytical method can be completed within the requested rush period. Rush service shall be required to be available for the following periods:

21 calendar days (with EDD)

14 calendar days (with EDD)

7 calendar days (with EDD)

3 calendar days (with EDD)

48 hours (EDD shall follow within 7 calendar days)

24 hours (EDD shall follow within 7 calendar days)

- 3.1.2.7.5 If the laboratory receives any sample that has exceeded or will exceed EPA holding times (excluding pH and 48-hour or less holding times) before the analysis is initiated (preparation and/or analysis), the laboratory shall immediately stop all work with that sample and call the TR or alternate for instructions prior to proceeding with analysis.
- 3.1.2.7.6 Premium pay for expedited analyses will be according to the Expedited Analysis Pricing Schedule included in the BOA, or by site specific contracts written against the BOA.
- 3.1.2.7.7 Invoicing and data reporting for rush samples shall be kept separate from regular samples.

3.1.2.8 Special Analyses

The laboratory shall provide a list of special analyses capabilities to the Contractor. The laboratory shall perform special analyses or studies when requested by the TR or authorized technical representative. Invoicing and data reporting for special analyses shall be kept separate from regular analyses.

3.1.3 Additional General Radioanalytical Requirements

See Appendix D of the QSAS (Attachment 1-A) for General Radioanalytical Requirements

3.1.3.1 Selection of Method

Analytical methods selected to produce data to meet the requirements of this SOW shall not have conditions and limitations that can preclude the possibility of meeting the data requirements. This condition applies to sample preparation, separation, preparation for counting, and actual counting or measurement of the sample. The requirements for specific analyses shall supersede any general requirements in the case of conflicting statements.

3.1.3.2 Instrument Maintenance/Repair Documentation

Following all repairs and modifications, verification of calibration and background determination and/or calibration with background determination shall be performed and documented.

3.1.3.3 Liquid Scintillation Counting

3.1.3.3.1 Sample preparation

Other Isotopes (e.g. C-14, Fe-55, Ni-63, Tc-99, I-129, I-131, Pm-147, Pb-210, Pu-241) Due to the variety of effective methods for the analysis of various matrices and analytes, specific sample preparation procedures shall be accepted by the Site prior to use.

3.1.3.3.2 Efficiency

Methods for determining efficiency (other than quench curves or constant quench) such as internal-standard methods, shall be performed according to Site accepted procedures

3.1.3.4 Gamma Spectroscopy

3.1.3.4.1 Sample Counting Requirements

Spectral Acquisition, Processing and QC

Software: The Laboratory shall identify the software package(s) and versions used to analyze Site samples in the Case Narrative. If the Laboratory uses commercially provided software unmodified to process spectra and calculate gamma spectroscopy MDAs, documentation shall be provided upon request. If the Laboratory has modified the commercial software, or uses in-house developed software, a description of the software or modifications shall be provided. The description shall include the algorithms and equations used for peak detection and fitting, nuclide identification, interference correction, energy and efficiency determination, and result, uncertainty and MDA calculation.

3.1.4 Data Management

3.1.4.1 General

3.1.4.1.1 It is the intent of this agreement to reach a standardization in the way each DOE Site (Contractor) receives its analytical data. Participating DOE Sites will work with analytical laboratories on this standardization effort. During the interim period, each participating laboratory shall adhere to the data delivery requirements of each participating DOE site (Contractor). The requirements for each site will be provided as part of the site specific written against the BOA. A generalized overview of requirements is provided in the QSAS (Attachment 1-A).

3.1.4.1.2 Each Contractor maintains a comprehensive data review and validation program with both technical and administrative aspects. Technical data review includes checks for reasonableness of data and compares results between replicates, other QA samples, and reference materials. Administrative review verifies that the requested analyses were performed according to subcontract specifications and that invoices match items delivered and subcontract prices.

3.1.4.1.3 Additionally, during the review of the data package if it is discovered that there are missing data, corrupted data files, blank diskettes, or similar problems with the data, the Contractor will notify the laboratory and the laboratory shall provide its response within 24 hours (Monday-Friday).

- 3.1.4.1.4 The laboratory shall respond to requests for data anomaly rechecks on previously reported results. The Contractor shall request data rechecks within 90 days from delivery of data. Rechecks after that period may be subject to a negotiated surcharge. The scope of the data recheck shall be defined in writing by the TR or authorized technical representative and may include review of calculations, aliquot size, yield, and other data associated with the reported analytical result. Rechecks may also involve review of the results of associated quality control samples and other samples processed in the same analytical batch. As with all QA/QC responses, written response of the data recheck must be received by the TR or authorized technical representative within 7 calendar days of the request. Initial transmittal of response via facsimile/FTP/email with hard copy follow-up is acceptable.
- 3.1.4.1.5 Detailed information regarding Laboratory Data Validation Functional Guidelines and Laboratory QC Samples will be provided by the individual Contractors as part of their site specific contracts written against the BOA.
- 3.1.4.1.6 The laboratory shall make modifications, changes, or improvements (including additional data reporting requirements) to the data format as specified in site specific contracts written against the BOA.

3.1.4.2 Data Reports

3.1.4.2.1 Specifications for report formats are listed in the QSAS (Attachment 1-A)_or site specific agreements

3.1.4.2.2 Analytical data Report

3.1.4.2.2.1 Each data report should be sent as one package. Data from different projects or delivery orders shall not be mixed on the same diskette.

3.1.4.2.2.2 Each page of the data package shall be sequentially numbered. The laboratory shall ensure that all computer printouts and photocopies are readable.

3.1.4.2.2.3 New analytical results (including QA samples), rush service, corrections of previous data, special studies data, and reanalyses shall be sent as separate files as requested by the Contractor.

3.1.4.2.3 Laboratory Case Narrative

The laboratory case narrative is a document written by the laboratory for each sample data set, which includes, at a minimum, the following:

- The cover page shall include a list of the samples included in the package
- A short description of the samples upon receipt at the laboratory, which may include date of receipt, condition of sample containers, temperature, and pH (pH paper is appropriate), and presence of the chain of custody;
- A listing of the procedures that are used in preparing the samples for analysis; if in-house procedures are used, reference must be made to standard methods on which these procedures are based;
- Any significant technical difficulties encountered in preparing and analyzing the samples, which may directly affect the quality of the results;
- Any instances of reparation and/or reanalysis of samples due to nonconformances with requirements
- A listing of deviations from regulatory-driven method requirements and accompanying regulatory agency-approved variance(s);
- An explanation of laboratory data qualifiers used with the reported data;
- Technically sound rationale for not achieving Contractor Required Detection limits (CRDL); and
- Signature(s) of laboratory designee(s) for ensuring data quality and data package content.

3.1.4.2.4 Electronic Data Deliverables

Format for Electronic Data Deliverables (EDDs) will be included in site specific contracts written against the BOA.

3.1.5 Turnaround Times (TAT)

3.1.5.1 Turnaround times will initiate from the time of sample receipt at the Laboratory and end at the time the required complete data deliverables are received by the contractor..

3.1.5.2 The standard turnaround time for laboratory results will be four (4) weeks (28 calendar days) after receipt of the last sample of a Reporting Delivery Group (RDG) at the Laboratory, unless specified otherwise by site specific contracts written against the BOA.

3.1.5.3 The Laboratory may request an extension of time to deliver within the required Turnaround Time. Such request for extension of performance must be presented to the Contractor's designee in writing, e-mail or fax, and must justify the reason for extension. Justifiable reasons may include:

- sudden, major weather-related impacts such as hurricanes, flooding, or tornadoes;
- sudden failure of electrical power;

- sudden failure of instrumentation
- unexpected absence of key personnel; or
- significant matrix interferences beyond expectations which may adversely affect the resultant quality control unless alternative chemistries are investigated.

3.1.6 Radioactive Materials Inventory

The Laboratory shall have and maintain a system to keep inventory of the radioactive materials in the laboratories possession. A report of this inventory shall be provided by the Laboratory, as requested, to the Contractor

3.2 Quality Requirements

Quality requirements are defined in the QSAS (Attachment 1-A)

3.3 Personnel Qualifications/Certification

Requirements for personnel qualifications/certifications are defined in the QSAS (attachment 1-A)

3.4 Deliverables

A Contractor's TR or authorized technical representative will serve as the point of contact for all technical communications associated with this specification. All other correspondence shall be directed to the Contractor's Procurement Representative for this agreement. Submittal of all deliverables generated through the performance of this specification shall be made to the TR or authorized technical representative, unless specified otherwise by site specific written against the BOA.

3.4.1 General Requirements

- 3.4.1.1** In no case will reports or analytical data be released to a third party (outside of the Contractor) without the prior written permission of the TR.
- 3.4.1.2** Each page of the data package shall be single sided and sequentially numbered. The laboratory shall ensure that all computer printouts and photocopies are readable.
- 3.4.1.3** All components of data package deliverables shall contain original documents where possible. Photocopies of original documents shall be included in the sample data package when the original is bound in a logbook maintained by the Laboratory. Photocopies of original documents may also be submitted if the original data were previously submitted under another data package.
- 3.4.1.4** Under no circumstances shall colored paper be used in a sample data package.
- 3.4.1.5** Hard copy deliverables shall be reported on CLP forms or equivalent unless specified otherwise by site specific contracts written against the BOA. No specific reporting format is specified in this document; however, the deliverables identified in the QSAS must be present in the hard copy deliverables.

3.4.2 Sample Analysis Reporting Categories

Sample Analysis Reporting Categories are defined in the QSAS (Attachment 1-A)

3.4.3 Raw Data

3.4.3.1 General

- 3.4.3.1.1 Raw data includes but is not limited to: logbooks, bench sheets, calibration records, continuing calibration verification samples (CCV), continuing calibration blanks (CCB), interference check samples (ICS), initial calibration verification samples (ICV), and initial calibration blanks (ICB), RAD spectra, ICSA from metals analysis, instrument printouts and other related documentation.
- 3.4.3.1.2 The Contractor reserves the right to visit the laboratory and review raw data.
- 3.4.3.1.3 Additionally, the Contractor may request that raw data be pulled, copied and sent to the Contractor in order to complete a records review.

3.5 Audits and Performance Evaluation

- 3.5.1 Audits and performance evaluation requirements are defined in the QSAS (Attachment 1-A)
- 3.5.2 A copy of all audits and a copy of any and all Corrective Action Reports or (CAR), or other responses, to audits on the laboratory conducted by the EPA or any other regulatory agency shall be sent to the designated person for each DOE Contractor within 30 calendar days of issuance of the audit response.

4.0 ACCEPTANCE OF SERVICES

Due to reporting requirements imposed on the Contractor by various oversight and regulatory agencies, analytical data may need to be used prior to actual acceptance. Use of reported data will constitute acceptance for samples analyzed under this agreement.

Analytical data are not deemed final until the laboratory has responded to all the Contractor's questions pertaining to a particular data set, the Contractor has formally accepted the data, and all data validation issues have been resolved.

5.0 THIRD PARTY (SUB-TIER) SERVICES

See the QSAS (Attachment 1-A)

6.0 ATTACHMENTS

- 1-A U.S. Department of Energy Office of Environmental Management Quality Systems for Analytical Services
- 1-B Analyte (Line Item Code) List