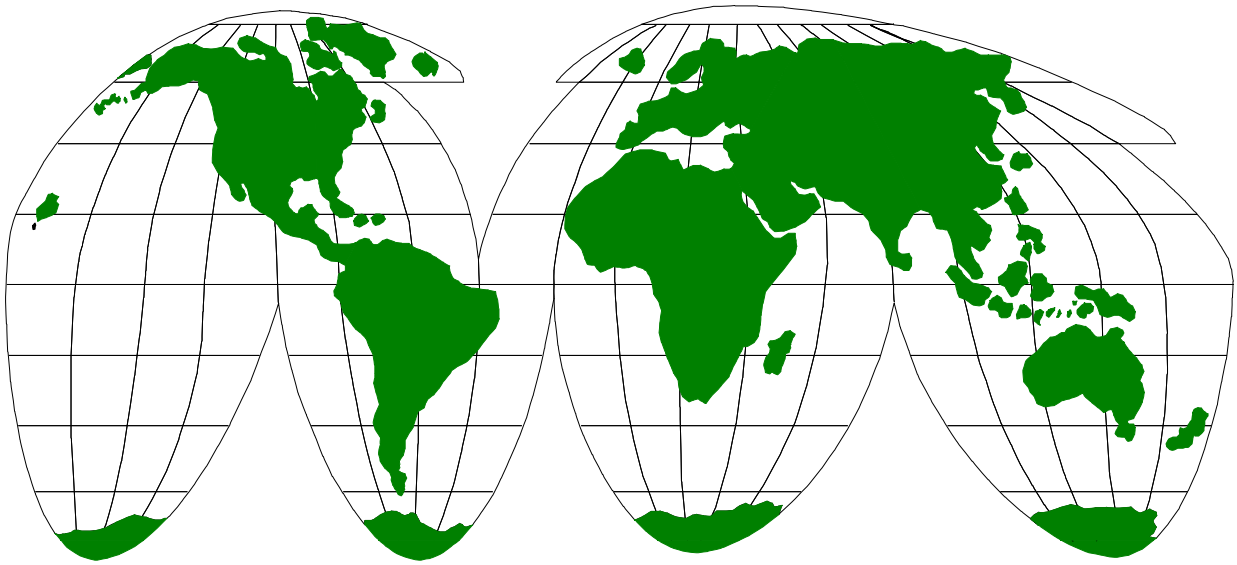
U.S. ARMY PUBLIC HEALTH COMMAND

ARMY INSTITUTE OF PUBLIC HEALTH-LABORATORY SCIENCES CUSTOMER SERVICE MANUAL

Serving Our Customers Worldwide

TECHNICAL GUIDE 214



March 2012

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This updated version supersedes USACHPPM TG 214, March 2005.

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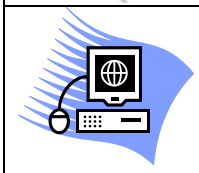
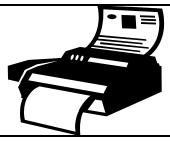
ABOUT LABORATORY SCIENCES AT THE ARMY INSTITUTE OF PUBLIC HEALTH

COMMUNICATION WITH AIPH-LS. The available means of communication with the Army Institute of Public Health, Laboratory Sciences (AIPH-LS) include—

WAYS TO COMMUNICATE WITH AIPH-LS	
	**TELEPHONE:** DSN: 584-2208 Commercial: 410-436-2208
	**"SAMPNEWS" MAILBOX IS AVAILABLE VIA E-Mail:** • **AIPH-LS Microsoft Outlook Users:** In Outlook, click on "New." In the "To" block type USAPHC-DLS-SampNews. • **ALL CUSTOMERS:** Send an e-mail message to USAPHC-DLSSampNews@amedd.army.mil
 **Internet**	For information, see the AIPH-LS Public Website Home Page at: http://phc.amedd.army.mil/topics/labsciences/pages/default.aspx To submit an analytical request: http://phc.amedd.army.mil/topics/labsciences/lsm/Pages/LIDS.aspx
	**FAX:** DSN: 584-4108 Commercial: 410-436-4108
	**FOR ROUTINE CORRESPONDENCE/SAMPLES:** Commander, USAPHC ATTN: MCHB-IP-LSM (Sample Management Laboratory) 5158 Blackhawk Road Aberdeen Proving Ground, MD 21010-5403
  **FedEx®** **UPS®**	**FOR SAMPLE SHIPMENTS:** Commander, USAPHC ATTN: MCHB-IP-LSM (Sample Management Laboratory) Building E-2100 Aberdeen Proving Ground, MD 21010-5403

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- **LSP VISION STATEMENT**

AIPH-LS VISION

To be a world class provider of comprehensive laboratory sciences services in support of the Army Public Health Program.

- **QUALITY ASSURANCE**

AIPH-LS QUALITY POLICY

Laboratory work will be performed within a quality system designed to—

- ◆ Consistently meet or exceed customer needs.
- ◆ Encourage continuous improvement through proactive leadership and involvement.

Our goal is to provide quality analytical results in a timely manner at a reasonable price.

TABLE OF CONTENTS

PAGE

PAGE

PAGE

FIGURES (CONT)

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CHAPTER 1

INTRODUCTION

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INTRODUCTION

1-1. PURPOSE

The Army Institute of Public Health (AIPH), Laboratory Sciences (LS) of the U.S. Army Public Health Command (USAPHC) is committed to excellent customer service. Every effort is made to give the customer what is needed, when it is needed. This Customer Service Manual reflects this commitment by giving AIPH-LS customers information and guidance on how to—

- Communicate with AIPH-LS.
- Select the Best Test Method and Analytical Test Code (Acode).
- Complete an AIPH-LS LIDS 330 (Request for Laboratory Services).
- Submit samples to AIPH-LS.

1-2. REFERENCES

Appendix A contains references that provide information about other areas of interest to AIPH-LS customers, such as regulatory requirements and sample collection techniques. These references include, but are not limited to, other USAPHC technical guides (TGs) and pertinent regulatory documents.

1-3. AIPH-LS FORMS

Appendix B provides copies of AIPH-LS Laboratory Information Documentation System (LIDS) referenced in this manual. Reproduction of these documents is permitted and encouraged.

1-4. ABBREVIATIONS AND TERMS

Appendix C contains the glossary which explains the abbreviations and terms used in this manual.

1-5. COMMUNICATION WITH AIPH-LS

> Communication and interaction with LS should begin in the earliest stages of project planning and continue throughout the entire life of the project.

a. **Means of Communication.** Communication with customers offers AIPH-LS the ability to respond to the customers' needs. The "WAYS TO COMMUNICATE WITH AIPH-LS" chart, located in the front of this manual, describes the available means of communication with AIPH-LS. Chapter 3 provides additional information on communicating and interacting with AIPH-LS.

b. **AIPH-LS Service Hours.**

(1) Technical Information and Routine Sample Receipt. Routine service hours are from 0800 to 1630 hours Eastern Standard Time, Monday through Friday, except for Federal holidays.

(2) Sample Receipt Outside of Normal Service Hours. Special arrangements must be made prior to the shipment of any samples that will arrive outside of AIPH-LS routine service hours. These arrangements are necessary to ensure appropriate AIPH-LS personnel will be available to receive, process, and preserve the samples.

c. **"Sampnews": The E-Mail Mailbox.**

(1) "Sampnews" is an electronic mail (e-mail) mailbox. This mailbox was established to offer AIPH-LS customers a convenient, effective, and efficient way to exchange information with AIPH-LS using e-mail. In AIPH-LS, the site is monitored on a regular basis by the laboratory consultants, section chiefs, and other parties, as appropriate, and can be accessed simultaneously by the AIPH-LS staff.

(2) Advantages of using the mailbox include the following:

- Eliminates the time spent on the telephone trying to track down the appropriate person.
- More than one person can access your message simultaneously, thereby speeding up responses.
- Not restricted to worldwide time zones.

- Messages can be sent 24 hours a day.
- Questions about the status of samples and laboratory reports can be answered quickly.
- Convenient route for submitting requests for laboratory services, LIDS 330. See Chapter 6 for more information about this form.

(3) To be an effective communication tool, messages sent to "Sampnews" need to be easy to understand, complete, and with a header that clearly summarizes the content. See Chapter 6, Figure 6-2, for a sample message.

HOW TO SEND A MESSAGE TO "SAMPNEWS"	
	• **AIPH-LS Microsoft Outlook Users:** In Outlook, click on "New." In the "To" block type USAPHC-DLS-SampNews. • **ALL CUSTOMERS:** Send an e-mail message to USAPHC-DLSSampNews@amedd.army.mil

d. **Customer Support Service.** Table 1-1 describes the customer's potential needs and the available AIPH-LS customer support services.

TABLE 1-1. AIPH-LS CUSTOMER SUPPORT SERVICES

CUSTOMER'S NEED	TECHNICAL CONSULTANT	SAMPNEWS MAILBOX
Selection of the proper **Acode**	X	
Choice of the most appropriate **SAMPLE ANALYSIS PRIORITY**	X	
Interpretation of regulatory procedures and documents	X	
Technical information on analyses	X	
Review of laboratory data and reports	X	
Coordination of priority, complex, or special projects	X	
Submission of **PROJECT MODIFICATIONS** to a processed LIDS 330		X
Cost quotes for sampling projects		X
Guidance pertaining to requirements for sample collection, shipping, or submission		X

TABLE 1-1. AIPH-LS CUSTOMER SUPPORT SERVICES (CONTINUED)

CUSTOMER'S NEED	TECHNICAL CONSULTANT	SAMPNEWS MAILBOX
Details about Sample Collection Kits		X
Details concerning sample processing		X
Project status reports	X	

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CHAPTER 2

QUALITY ASSURANCE

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QUALITY ASSURANCE

2-1. ACCREDITATION

a. The USAPHC Laboratory Sciences Portfolio (LSP) includes a network of laboratories both in the continental United States (CONUS) and outside the continental United States (OCONUS). The AIPH, located at Aberdeen Proving Ground (APG), Maryland, is a major component of the LSP and is identified in this technical guide by the acronym AIPH-LS.

b. The AIPH-LS maintains accreditation by third party organizations to both National and International Standards. The scope of testing for these accreditations covers environmental, occupational health, and clinical samples.

- Accreditations—Environmental.

  - American Association for Laboratory Accreditation (A2LA), which presently incorporates the International Organization for Standards (ISO) 17025.

  - U.S. Environment Protection Agency (USEPA) Environmental Lead Laboratory Accreditation Program (ELLAP), which presently incorporates the ISO 17025.

  - National Environmental Laboratory Accreditation Conference (NELAC) accreditation, through the State of Pennsylvania.

- National Accreditations—Occupational Health.

  - American Industrial Hygiene Association (AIHA), which presently incorporates the ISO 17025.

- National Accreditations-Clinical.

  - Department of Defense (DOD) Clinical Laboratory Improvement Program (CLIP).

  - Commission on Office Laboratory Accreditation (COLA).

c. LS also maintains certifications for drinking water in Maryland and Virginia.

d. The quality system meets all the requirements of ISO 17025, which cover testing laboratories. Internal quality control (QC) procedures are performed daily to ensure continuing quality of the analytical product. The AIPH-LS is a regular participant in the following Proficiency Analytical Testing (PAT) Programs:

- Environmental Lead PAT Program.
- Environmental Resource Associates (ERA) Soil PE Program.
- ERA Interlaboratory Comparison Study for Radiochemistry.
- ERA Water Pollution PE Studies.
- ERA Water Supply PE Studies.
- AIHA PAT Program.
- FDA Round Robin Program.
- ASTM Program.
- Oak Ridge Program.
- Wibby Environmental Soil PE Program.
- Wibby Environmental Water Pollution PE Studies.

2-2. QUALITY PLANNING

a. Quality planning for analytical work is designed to deliver acceptable quality data that meets the customer needs at a reasonable cost. Proper planning requires that AIPH-LS personnel involved in the work are fully informed as to the purpose and objectives of the projects they support. This understanding is vastly improved if the AIPH-LS staff is involved in establishing Data Quality Objectives (DQOs) prior to beginning the data collection operations. Once the data are collected, they are evaluated to ensure that the original projects' DQOs have been met.

b. The information in the following paragraph describes procedures for project planning and for assessing the quality of the data collected.

2-3. DATA QUALITY OBJECTIVES

a. The DQO process is a series of planning steps based on the scientific method that is designed to ensure that the type, quality, and quantity of environmental data used in decision-making are appropriate for intended application. The steps of the DQO process are shown in Figure 2-1.

b. The DQO process allows decision makers to define their data requirements and acceptable levels of decision errors during planning before any data are collected. The DQOs are qualitative and quantitative statements derived from outputs of each step of the DQO process that optimize the design for obtaining data by—

- Clarifying the study objective.
- Defining the most appropriate type of data to collect.
- Determining the most appropriate conditions from which to collect the data.
- Delineating the decision rules and acceptable errors.

c. The basic indicators of data quality are accuracy, precision, completeness, representativeness, comparability, and detection limits. Acceptance limits for each of these specific indicators must be defined and often tailored to specific measurement method attributes.

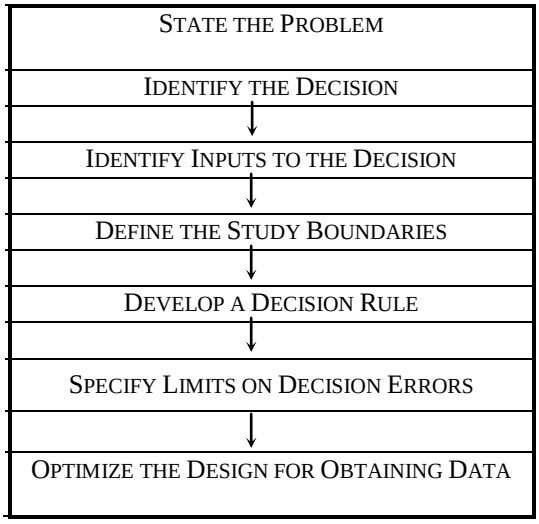

FIGURE 2-1. DQO PROCESS STEPS

USAEPA Guidance for the Data Quality Objective Process, EPA QA/G-4, August 2000.

Our goal is to establish procedures that meet the DQOs required or requested by AIPH-LS customers.

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CHAPTER 3

AIPH-LS ANALYTICAL SERVICES

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AIPH-LS ANALYTICAL SERVICES

3-1. AREAS SUPPORTED BY AIPH-LS

a. The AIPH-LS support is provided primarily to Army environmental and occupational health programs engaged in health risk assessment. Many of these programs are internal to USAPHC, but support is also extended directly to installations throughout CONUS and OCONUS. Other DOD and Federal agencies are supported on a space-available or reimbursable basis.

b. The DLS offers the customer a number of distinct advantages over other laboratories, including convenience and flexibility.

WHY USE AIPH-LS?

- One-stop shopping for laboratory analysis.
- Accessible.
- Hassle free–no need to write and manage contracts.
- In-depth experience with the military unique products and activities.
- Flexible–able to react quickly to non-standard needs.
- Emphasis on quality–one of the most highly accredited laboratories in the country.
- Archiving of Analytical Data

3-2. ANALYTICAL SERVICES

Staffed with experienced professionals who are familiar with the military's special needs, we are uniquely able to respond to emergencies and to support projects with unusual requirements. In a typical year, AIPH-LS chemists analyze thousands of samples and perform analytical procedures using methodology from—

- USEPA.
- American Society for Testing and Materials (ASTM).
- National Institute of Occupational Safety and Health (NIOSH).
- Association of Official Analytical Chemists (AOAC).
- The "Standard Methods for the Examination of Water and Wastewater" publications.
- Internally developed custom methods.

CUSTOM METHODS

- When the need arises, AIPH-LS chemists develop custom methods to meet a client's specific requirements.
- Data generated by AIPH-LS analysts plays a critical role in health risk assessments and determining safe working environments.

3-3. SERVICES PROVIDED

For a summary of services provided by AIPH-LS, see Figure 3-1.

ANALYTICAL SERVICES

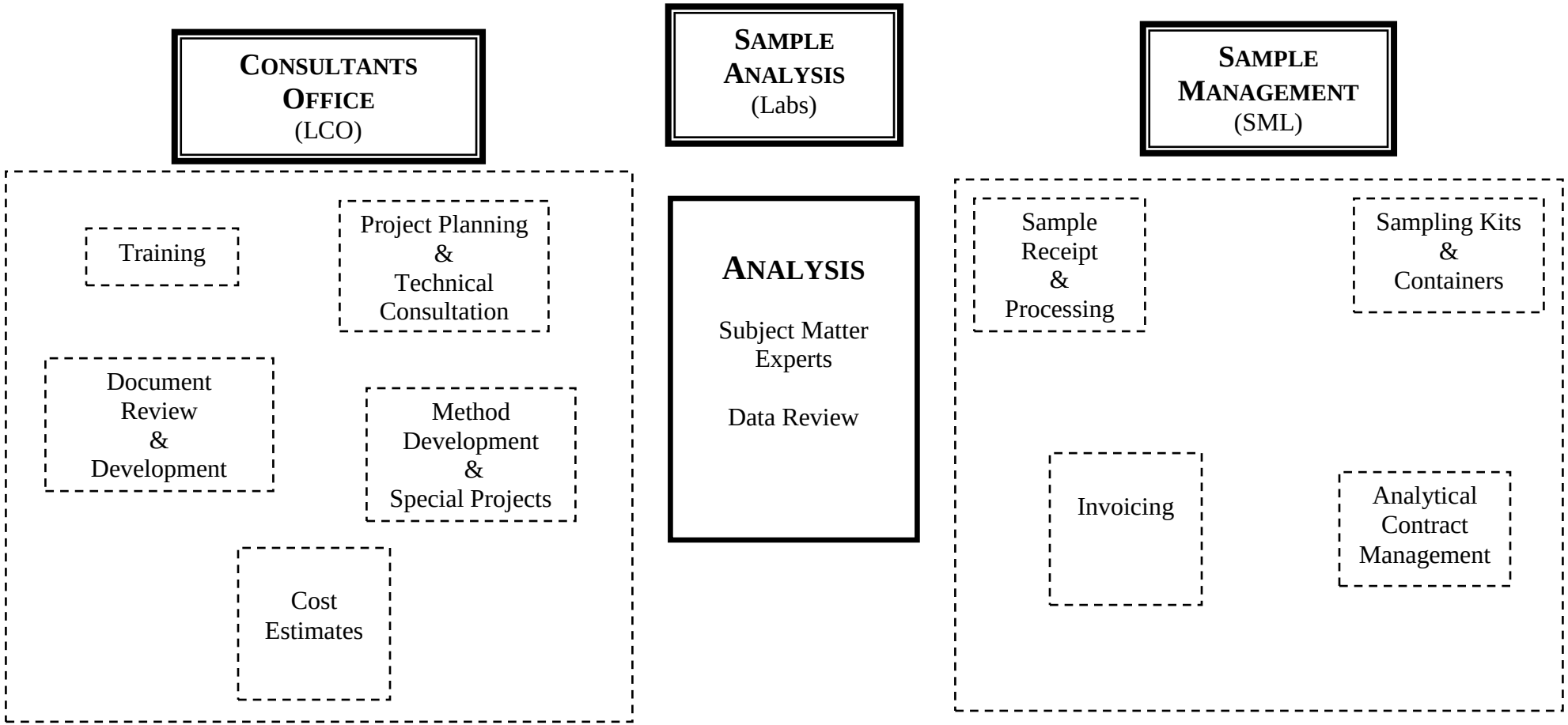

FIGURE 3-1. ANALYTICAL SERVICES

3-4. ANALYSES PERFORMED

Figure 3-2 lists the various types of analyses performed by AIPH-LS.

ANALYSES PERFORMED	SAMPLE MATRICES ANALYZED
Military Unique Compounds Metals Volatile & Semivolatile Organic Compounds Pesticides Inorganics Radioisotopes (Ra 226, 228, Sr, Am, DU, Tritium) Gross Alpha, Gross Beta, & Gamma Total and Isotopic Uranium Asbestos Metals Fragment Analysis	Water: Waste, Drinking, Ground, Surface Hazardous Waste Soil and Sediment Industrial Hygiene/Occupational Health (filters, wipes, personnel monitors, etc.) Animal and Plant Specimens Air Clinical Specimens (Radiobioassay) Unknown Bulk Materials

Figure 3-2. TYPES OF ANALYSES AVAILABLE

EMPHASIS ON MILITARY-UNIQUE ANALYSES

- Explosives
- Explosive taggants
- Depleted uranium (DU)
- White phosphorus
- Riot control (CS) agents

3-5. EXPANDED ANALYTICAL SERVICES

In addition to performing standard sample analysis, AIPH-LS technical experts provide the following services:

a. **Document Review And Development.** AIPH-LS technical experts review a wide range of documents including:

- Quality assurance project plans and manuals.
- Sampling plans and DQOs.
- Technical guides.
- Proposed methodology and standing operating procedures (SOP).
- Health Risk Assessment documents.
- Draft regulations.

b. **Third-Party Data Validation (through a contractor).** Performed when required by the project, this activity involves a third party comparing laboratory data to project criteria (measurement performance criteria) and other project requirements (data quality objectives). A formal report is produced. If needed, third-party validation should be coordinated with LS during the project planning stages. There is a separate charge for this service.

c. **Consultation.** Resident within AIPH-LS are technical experts who can help you plan projects and interpret results that save time, money, and effort while assuring results will satisfy goals and objectives.

- Project scheduling.
- Project planning and developing DQOs.
- Design of sampling and analysis strategies.
- Method selection.
- Completion of request for analysis (LIDS 330 and LIDS 9).
- Data review and interpretation.

- Technical assistance and problem solving.
- Serve as expert witnesses.
- Development of national/international policy.

d. **Training.** AIPH-LS experts have provided in-house and on-site training for military personnel, civilian engineers and scientists, and university graduates covering a variety of subjects including:

- Service—
  - Project planning (analytical emphasis).
  - Sample kit preparation.
  - Sample handling.
  - Documentation.
  - Tracking.
- Technical—
  - Army Medical Laboratory.
  - Custom training (industrial hygienists, engineers, etc.)
  - Field training exercises.

e. **Method Development and Special Projects.**

(1) The unprecedented environmental and occupational health problems presented by military operations often demand that sampling and analyses methods be developed in order to provide needed information. AIPH-LS scientists develop analytical methods or modify established procedures to meet client needs. By using innovative methods, AIPH-LS can—

- Identify and quantify unusual compounds.
- Reach lower detection limits.
- Adapt procedures to new matrices.

(2) Before use, each method is tested, documented, and validated according to accepted national standards. Many are specifically tailored to meet military needs (for example, low-level explosives; chemical agent break-down products; depleted uranium; nuclear, biological, and chemical-environmental, and so forth.)

f. **Capabilities Increased By Contract Laboratory Support.**

(1) The AIPH-LS uses qualified contract laboratories to increase in-house capabilities and to handle sample overflow during busy periods. Before any contract is signed with a commercial laboratory, the laboratory is carefully scrutinized. AIPH-LS technical staff performs onsite inspections of the facilities and evaluates the laboratory's ability to meet the needs of the government.

(2) The AIPH-LS oversight does not end with the award of the contract. The Contracting Officer's Representative, QC Manager, and senior analysts continue to monitor the laboratory's performance, reviewing QC records and data generated. If analyses cannot be performed in-house, AIPH-LS will locate a contractor that can do the work and will set-up the contract.

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CHAPTER 4

COMMUNICATING AND INTERACTING WITH AIPH-LS

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COMMUNICATING AND INTERACTING WITH AIPH-LS

4-1. EFFECTIVE COMMUNICATIONS

a. **Teamwork.** Teamwork and effective communication are critical to achieving project goals. Whether filling out a LIDS 330, a LIDS 9 (see Chapter 6), or sending messages via e-mail please provide complete information that is easily understood. If details are missing or the message is ambiguous, the project may be adversely affected and time wasted.

b. **Planning a Project.** Consider AIPH-LS as a member of your project team and involve one of our consultants early in the planning process. Keep them informed throughout the life of the project. Alert them to any delays or cancellations of projects or substantial alterations in the number and type of samples or analyses required. Seemingly, minor changes can have serious repercussions.

LET AIPH-LS HELP YOU PLAN YOUR PROJECT
GET US INVOLVED IN THE BEGINNING OF YOUR PLANNING, AND WE BECOME A PART OF YOUR PROJECT TEAM.

c. **Tools of Communication.** When traveling and managing a heavy schedule, electronic sharing of information can be a life saver whether by telephone, e-mail, or fax. However, if the messages are unclear or incomplete, efforts are wasted. With the high volume of e-mail, filtering of information becomes critical.

INCLUDE PROJECT NAME AND ACCOUNTING NUMBER (E.G., SUB-JONO) IN THE SUBJECT LINE OF E-MAIL MESSAGES. THIS HELPS US IDENTIFY THE PROJECT AND QUICKLY REFERENCE ALL ASSOCIATED CORRESPONDENCE.

4-2. CUSTOMER SUPPORT SERVICES OFFERED BY AIPH-LS

a. **AIPH-LS Technical Consultants.**

(1) When planning a project, the AIPH-LS consultants are the first people to contact within AIPH-LS. Their primary responsibility is to give customers the technical assistance they need to make sound decisions concerning the analytical aspects of projects from planning to data interpretation. They work with the customer to assure project DQOs are met.

(2) These senior scientists are experts in environmental testing, occupational health, special projects, and field analysis. The consultants serve as the primary liaison between customers and the analytical and administrative areas of AIPH-LS. If face-to-face discussions will facilitate planning, they will organize a meeting including participants from both AIPH-LS and your team to iron out project details (such as, number of samples, methods, required QC, sample shipment and receipt, and so forth).

b. **Quality Manager.** The quality manager will—

(1) Work with the customer in preparing Quality Assurance Plans.

(2) Assure that project DQOs are met.

(3) Monitor customer satisfaction.

(4) Recommend customer service improvements.

(5) Participate in internal and external working groups and committees dealing with quality improvement issues.

(6) Lead benchmarking efforts to measure AIPH-LS's work against others in the industry and to obtain ideas for improving quality and efficiency.

c. **Sample Kits Preparation and Shipping.**

(1) When requested, sample kits are prepared by the Sample Management Laboratory using information provided in the LIDS 330.

(2) Sample kits contain containers, preservatives and labels needed for collection. (See chapter 7 for more details).

Be sure your containers are ready on time.
Submit your request early!

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CHAPTER 5

SELECTING THE BEST TEST METHOD

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SELECTING THE BEST TEST METHOD

5-1. BEST TEST METHOD SELECTION ASSISTANCE

a. AIPH-LS technical consultants can assist customers in selecting the best test method. See Chapter 4 for a discussion of their role and how to contact them.

b. AIPH-LS constantly updates the analyses available to our customers.

5-2. TEST METHOD SELECTION CONSIDERATIONS

a. Selecting the most appropriate test method is critical for obtaining the laboratory analysis data needed to meet the DQOs of a project. Determining the best test method should be done during the first stages of project planning. See Figure 2-1 for DQO process steps.

b. Several factors need to be considered when selecting the best test method for a project. All factors are independent and should be considered concurrently.

FACTORS TO CONSIDER WHEN SELECTING THE BEST TEST METHOD FOR YOUR PROJECT—

- Project DQOs
- Test descriptions for the parameters to be analyzed
- Methods mandated by Federal, State, and local authorities
- Method Reporting Limits (MRLs) required
- Matrix or matrices of the samples to be analyzed
- Sample priority
- Sample safety considerations
- Sample or site history
- Samples with short-holding times

5-3. SELECTING THE ACODE

a. **What is the Acode?** The Acode (formerly called the DLS Test Code) is a "**unique**" number (i.e., similar to a catalog number) assigned by the AIPH-LS to each procedure.

b. **Why should the Acode be used?** The Acode is the simplest and most accurate means of referencing and identifying a specific test method and the parameters associated with that test method. Very often there are multiple procedures available for the same test method. The Acode offers a unique means of differentiating between these test methods, and clearly indicates to AIPH-LS personnel exactly what the customer wants and needs.

THE ACODE CLEARLY IDENTIFIES—

- A specific test description.
- The standard method associated with the test description.
- The sample matrix or matrices required for the test description.
- The list of target compounds analyzed by the test description and the report limit of each compound.
- The sample collection criteria associated with the test description, including sample size, container, preservative, and holding time.
- The price of the specific test description.

c. **When should the Acode be selected and used**?

(1) The customer should note the corresponding Acode at the same time the best, or most appropriate, test methods are determined. The AIPH-LS technical consultants can assist customers in making their selection.

(2) The AIPH-LS and their customers should use the Acode as a point of reference in the communication and correspondence process associated with each project. Consistent use of a specific Acode eliminates the possibility of miscommunications as to which test method is actually needed by the customer.

5-4. SAMPLE ANALYSIS PRIORITY DESIGNATIONS

a. Sample analysis priorities are critical in determining the turnaround time (TATs) and the price for each analysis. Samples are assigned processing priority based on three AIPH-LS sample analysis priorities—

- Standard.
- High-priority.
- Top-priority.

b. Table 5-1 summarizes the guidelines for AIPH-LS sample analysis priorities. Unless otherwise specified, all samples are assigned standard priority. High-priority and top-priority requests should be coordinated with AIPH-LS in advance.

TABLE 5-1. GUIDELINES FOR DLS SAMPLE ANALYSIS PRIORITIES

	STANDARD	HIGH-PRIORITY	TOP-PRIORITY
BASIC SELECTION CRITERIA	Routine Analytical Response is Involved	Rapid Analytical Response is Desired	Fastest Analytical Response Possible as Needed
COSTS	AIPH-LS Published Fee	1.5 Times the Published Fee	2.0 Times the Published Fee
TURNAROUND TIME (TAT)	28 Calendar Days	14 Calendar Days	7 Calendar Days
	o The TAT for each analysis and sample type should be determined as part of the project DQOs and by mutual agreement with AIPH-LS. o The specific TAT for each sample is analysis, matrix, and project dependant. o TATs are affected by the number of samples involved for each analysis.		

5-5. SAMPLE SAFETY CONSIDERATIONS

a. The AIPH-LS must be informed if samples are known or suspected of containing hazardous materials, either chemical or biological.

(1) Appropriate precautionary measures must be taken to protect everyone who will have any contact with these kinds of samples.

(2) Information concerning hazards, or possible hazards, must be part of the communication process with AIPH-LS and clearly indicated on all the paperwork and on the samples themselves.

b. Many chemicals used to preserve samples are considered to be hazardous materials. Sampling personnel must be informed about the possible hazards involved when handling these chemicals. Material Safety Data Sheets (MSDSs) for chemical preservatives are included in the Sample Collection Kits.

5-6. ADDITIONAL SAMPLE OR PROJECT CONSIDERATIONS

a. **Sample or Site Histories.** The AIPH-LS can better serve its customers if the following sample or site information is provided:

(1) Known or suspected high concentrations of the analyte of interest.

(2) Known or suspected interfering substances that may impede the analysis of the sample.

(3) Potential safety hazard.

b. **Short-Holding Time Sample Analyses.**

(1) Holding time is defined as the elapsed time from the date and time of sample collection until the sample is extracted or analyzed. Most holding times for analytes are mandated by the USEPA in order to maintain the integrity of the analyte of interest.

(2) For the purposes of this manual, short-holding time analyses are considered to be those with a 48-hour or less holding time. In order to ensure analyses are performed in accordance with mandated holding times, customers need to make advance arrangements with DLS when requesting these types of analyses.

(3) Analyses must be performed within 48 hours of sample collection; therefore, samples should be collected early in the week, if possible. The customer should coordinate delivery of samples requiring short-holding time analyses. Discuss any concerns with an AIPH-LS consultant.

(4) Table 5-2 lists the environmental analyses that have 48-hours or less holding times.

TABLE 5-2. SHORT-HOLDING TIME ANALYSES (48 HOURS OR LESS)

PARAMETER	MATRIX	HOLDING TIME
Asbestos	Water	24 hrs
BOD	Water	48 hrs
Color	Water	48 hrs
MBAS	Water	48 hrs
Nitrate (unpreserved)	Water	48 hrs
Nitrite (unpreserved)	Water	48 hrs
Ortho Phosphate	Water	48 hrs
pH	Water & Oil	Immediate
Turbidity	Water	48 hrs
Chromium VI	Water, Soil & Air	24 hrs
VOC	Soil (En Core™)	48 hrs
Total & Fecal Coliform	Water	30 hrs*

Note:
* Depending on regulatory requirements, may be less than 30 hrs.

c. **Other Holding Times.** To analyze samples for many organic compounds, the USEPA requires that initial extractions be done within 7 days of sample collection. Exact holding time requirements vary with the analyte, matrix, method of analysis, and regulatory constraints. Consult the method for specific requirements or contact the AIPH-LS Consultants Office.

AVOID COSTLY RE-SAMPLING!

TO ENSURE YOUR SAMPLES ARE ANALYZED OR EXTRACTED WITHIN THE REQUIRED HOLDING TIME, COORDINATE SAMPLING AND SHIPMENT OF YOUR SAMPLES WITH THE AIPH-LS CONSULTANTS' OFFICE.

d. **Sample Retention**. Samples will be held by AIPH-LS no longer than 30 days after the sample report is issued. Special arrangements for longer retention may be requested.

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CHAPTER 6

SUBMITTING REQUESTS FOR LABORATORY SERVICES

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SUBMITTING REQUESTS FOR LABORATORY SERVICES

6-1. PURPOSE OF A REQUEST FOR LABORATORY SERVICES

a. Submitting a Request for Laboratory Services form template (LIDS 330) should be one of the last steps in the project planning process. However, the information needed to complete this form template should be established in the early stages of the project planning and communication process with AIPH-LS.

b. When requesting analyses, the customers should be very specific.

(1) Instead of using an ambiguous term, such as total metals, list specific analytes (for example, cadmium, copper, lead, mercury, zinc, and so forth).

(2) Unclear or incomplete requests will result in a substantial delay in–

- Processing the requests.
- Analyzing the samples.
- Returning the results to the customer.

c. The LIDS 330 is used to generate—

(1) A cost quote for analytical services if requested through the Lab Consultant.

(2) A Container Requisition Report, which is used to prepare a Sample Collection Kit.

d. This form is electronically available on the AIPH-LS Home Page at: http://phc.amedd.army.mil/topics/labsciences/lsm/Pages/LIDS.aspx

e. A reproducible copy of this form is located in Appendix B.

6-2. COMPLETING A REQUEST FOR LABORATORY SERVICES

Figure B-1 provides a sample LIDS 330 form.

6-3. SUBMITTING A COMPLETED AIPH-LS LIDS 330

This form template should be submitted to AIPH-LS, either in electronic or hard copy form, at least 30 days *before* sample collection whenever possible.

a. E-mail to "Sampnews" mailbox as follows:

HOW TO SEND A MESSAGE TO "SAMPNEWS"	
	◆ **To complete and submit a LIDS 330 analytical request to Sampnews on line (recommended), use the link below and click the 'send' button at the bottom of the LIDS 330 document.** http://phc.amedd.army.mil/topics/labsciences/lsm/Pages/LIDS.aspx ◆ **Send an email to message to Sampnews with the request as an attachment (word or pdf document):** **AIPH-LS Microsoft Outlook Users:** In Outlook, click on "New." In the "To" block type USAPHC-DLS-SampNews. Attach the LIDS 330 before sending. **All Customers:** Send an e-mail message (with LIDS 330 attached in word or pdf format) to USAPHC-DLSSampNews@amedd.army.mil

b. Fax to one of the following numbers:

- DSN 584-4108
- Commercial 410-436-4108

c. Mail a hard copy to the following address:

Commander, USAPHC
ATTN: MCHB-IP-LSM (Sample Management Laboratory)
5158 Blackhawk Road
Aberdeen Proving Ground, MD 21010-5403

6-4. RECEIPT CONFIRMATION

AIPH-LS will send an e-mail message to confirm the receipt of every request for services.

6-5. MODIFYING REQUESTS FOR LABORATORY SERVICES

a. Contact AIPH-LS immediately with all changes to a processed LIDS 330.

b. A sample "Sampnews" revision message to an original LIDS 330 request is shown in Figure 6-3. To be an effective communication tool, messages sent to "Sampnews" need to be easy to understand, complete, and with a header that clearly summarizes the content.

c. Submit all changes through the "Sampnews" mailbox. This e-Mail system is the most effective means of communicating with AIPH-LS, because all AIPH-LS staff members have access to this mailbox.

To: USAPHC-DLSSampNews@amedd.army.mil
Copy: Smith, Joe (Consultant)
Subject: Camp Swampy #32-XX-XXXX, John Doe, Delay, Weekend Arrival

All:

The samples from my project at Camp Swampy (32-XX-XXXX, Phase 1) that were supposed to arrive on 25 April (see attached LIDS 330) will not be arriving at the lab until 28 April because of problems accessing the sample sites. Unfortunately, the 28th is on a Saturday, so you will need to make special arrangements to receive the shipment on the weekend. For tracking of the shipment, I will fax you a copy of the packing documents and the Federal Express tracking numbers. We anticipate shipping four coolers.

Preliminary measurements of conductivity taken in the field indicate the samples are high in salt. Please let me know ASAP if you encounter any problems or need to alter analytical methods because of the high salinity.

In addition to the 24 water samples promised, there will be four soil samples to be analyzed for chloride using EPA 300.0.

If there are any questions, I can be reached at (XXX) XXX-XXXX during the day (messages only since I will be in the field) and at (XXX) XXX-XXXX in the evening. My e-mail address is John.Doe@campswampy.army.mil

John Doe

FIGURE 6-2. "SAMPNEWS" REVISION MESSAGE TO AN ORIGINAL LIDS FORM 330 REQUEST (SAMPLE)

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CHAPTER 7

SUBMITTING SAMPLES TO AIPH-LS

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SUBMITTING SAMPLES TO THE AIPH-LS

7-1. SAMPLE COORDINATION REQUIREMENTS OCONUS CUSTOMERS

The OCONUS environmental and occupational health customers should coordinate with the nearest laboratory facility.

a. **Europe, Africa, Middle East should coordinate with—**

USAPHR-Europe:

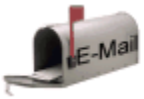
APO Mailing Address
Commander, USAPHCR-EUR
Department of Laboratory Sciences
ATTN: MCHB-RE-L
CMR 402
APO AE 09180-3619

Commercial Mailing Address (for FedEx, UPS, etc.)
USAPHCR-Eur
Department of Laboratory Sciences
ATTN: MCHB-RE-L (LS)
Kirchberg Kaserne
Gebäude 3809, Raum 110
66849 Landstuhl
Germany

Telephone Numbers
DSN 314-486-7052 or 8381 (alternate)
Commercial or Civilian 06371-86-7052/8381
(From CONUS) 011-40-7381-86-7052/8381

Fax Numbers
DSN 314-486-7054 or 314-486-8788 (alternate)

E-mail Address
usachppmeur.dlshotline@amedd.army.mil



b. **Asia, Hawaii, Alaska should coordinate with—**

USAPHR-Pacific: **APO Mailing Address**
Commander, USAPHCR-PAC
Unit 45006 (MCHB-RP-L)
APO, AP 96343-5006

USAPHR-Pacific: **Commercial or Civilian Mailing Address**
(for FedEx, UPS, etc.)
USAPHCR-PAC
Building 715, Camp Zama
Zama-shi, Kanagawa-ken
T228-8920, Japan

Telephone Numbers
DSN 315-263-8415
Commercial within Japan: 0462-51-1520, Ext. 263-8415
Commercial from outside Japan: 011-81-3117-63-8415

Fax Numbers
DSN 315-263-8597
Commercial within Japan: 0462-51-1520, Ext. 263-8507
Commercial from outside Japan: 011-81-3117-63-8597

E-mail Address
PHCR-Pacific-EL-Customer-Support@AMEDD.ARMY.MIL

7-2. SAMPLE COORDINATION REQUIREMENTS FOR CONUS CUSTOMERS

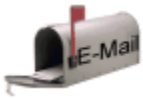
The CONUS environmental and occupational health customers should coordinate with the nearest laboratory facility as follows:

Mailing Address (routine correspondence/samples)
Commander, USAPHC
ATTN: MCHB-IP-LSM (Sample Management Laboratory)
5158 Blackhawk Road
Aberdeen Proving Ground, MD 21010-5403

Commercial Mailing Address (for FedEx, UPS, etc.)
Commander, USAPHC
ATTN: MCHB-IP-LSM (Sample Management Laboratory)
Building E-2100
Aberdeen Proving Ground, MD 21010-5403

Telephone Numbers
DSN 584-2208
Commercial 410-436-2208

Fax Numbers
DSN 584-4108
Commercial 410-436-4108



E-mail Address

- **Internal Customers:**

In Outlook, click on "New." In the "To" block type USAPHC-DLS-SampNews.

- **All Customers:**

Send an e-mail message to
USAPHC-DLSSampNews@amedd.army.mil

7-3. ENVIRONMENTAL SAMPLE COLLECTION KITS

a. The AIPH-LS prepares and provides environmental sample collection kits upon request. These kits are customized for specific projects, with labels and supplies issued according to project needs and customer request. Kit containers are selected and labeled for a specific analysis. These should not be interchanged without prior coordination. Contact an AIPH-LS consultant when using containers not supplied by AIPH-LS to ensure container specifications meet laboratory requirements. The AIPH-LS sample collection kits are prepared using quality containers and supplies.

b. The glass containers and plastic wares used to prepare AIPH-LS sample kits are purchased clean according to the USEPA requirements. Each shipment lot of containers and preservatives is received with a certificate of analysis, which certifies container cleanliness, and quality of the product.

c. Sample kit supplies may include preservatives, pipette bulbs, custody labels, pertinent paperwork, sample blanks, packaging material, temperature bottle, and so forth.

7-4. OCCUPATIONAL HEALTH SAMPLE COLLECTION REQUIREMENTS

Detailed instructions concerning occupational health sample collection requirements can be found in USAPHC TG 141 which is available on the USPHC Library Home Page at http://phc.amedd.army.mil/Pages/Library.aspx

7-5. RADIOBIOASSAY SAMPLE COLLECTION REQUIREMENTS

Detailed instructions concerning radiobioassay collection requirements can be found in USAPHC TG 211, which is available on the USAPHC Library Home Page at: http://phc.amedd.army.mil/Pages/Library.aspx

7-6. SAMPLE REJECTION

a. To assure quality results to the customer, samples that do not meet the acceptance criteria established by regulatory agencies or AIPH-LS may be rejected. Sample Custody Coordinators and AIPH-LS technical staff members have the right to temporarily reject samples pending confirmation from the customer.

b. When samples are rejected, a sample rejection form is used for documentation and states—

- Who rejected the sample.
- The reason for the rejection.
- When the project officer was notified.

c. When a project officer or other approval authority makes a decision to have rejected samples analyzed, the request will be documented on the sample rejection form, and the results for the sample will be qualified.

7-7. REQUIRED SHIPMENT FORMS

a. Table 7-1 lists the required sample submission/shipment forms.

TABLE 7-1. REQUIRED AIPH-LS SHIPMENT FORMS

ENVIRONMENTAL	OCCUPATIONAL HEALTH
LIDS 330 (Request for Laboratory Services)	LIDS 9 (*Industrial Hygiene Sample Submission*)
If required: LIDS 235 (*Chain-of-Custody Record*)	

b. These and other AIPH-LS forms are available at the following address on the LS web site:

http://phc.amedd.army.mil/topics/labsciences/lsm/Pages/LIDS.aspx

7-8. SAMPLE FIELD IDENTIFICATION, PRESERVATION, AND LABELING

a. **Field Identification**. AIPH-LS – Sample Management Laboratory (SML) must keep track of your samples and sample information. Using the "**unique**" Field Identification (ID) Number you provide, we check your packing list or Chain-of-Custody (COC) documents to account for every sample and each container received. Listed below are several tips on how to simplify field numbering—

(1) Keep numbering simple, use a consistent system.

(2) Establish the numbering system to be used before collecting the samples.

(3) Clearly label blank and duplicate samples such as Blank-1, Blank-2, Duplicate-1, Duplicate-2, and so forth.

(4) Samples with multiple containers: The containers for each sample should be marked with the same ID. The analysis will identify the unique containers.

b. **Preservation**. Annotate on the collection container whether preservative has been added to the sample. Each label affixed to the container or provided by AIPH-LS should have the preservation recommended by AIPH-LS for the specific analysis. Some containers provided will already contain the preservative prescribed and these containers must not be rinsed. Samples requiring preservation at 4^{o} Celsius (^{o}C) +/- 2^{o} Celsius must be shipped under refrigerated

conditions. To help maintain refrigerated conditions, it is recommended that the cooler be cooled down before storing or packaging samples if possible.

c. **LABELING**. Labels provided by AIPH-LS-SML contain standard information fields which are to be filled out by the customer. Waterproof permanent ink markers are recommended for use when writing on the labels. See Figure 7-1 "Field Sample Container Label."

.

PROJECT:	32-XX-XXXX
INSTALLATION:	CAMP SWAMPY
POC:	JOHN DOE
FIELD #:	NW-1
DATE COLLECTED:	19 MAY 2000
TIME COLLECTED:	1430
SAMPLE PRESERVED:	pH<2 HNO3
ANALYSIS REQUIRED:	CADMIUM

FIGURE 7-1. FIELD SAMPLE CONTAINER LABEL (SAMPLE)

7-9. SAMPLE PACKING INSTRUCTIONS

a. Know which samples require special handling, packing, or shipment. Radiochemistry tests, in particular, often require special handling.

b. Verify that all sample container caps and lids are tight and not leaking.

c. Mark the level of liquid in sample containers with indelible ink. If a sample leaks during shipment, AIPH-LS will contact the project officer and a decision will be made as to whether the sample needs to be recollected.

d. Set the sample containers in an upright position in the shipping container (which must be leak-proof). Acceptable containers and coolers can be obtained from AIPH-LS upon request.

e. Place an absorbent in the shipping container. This is absolutely necessary if any samples contain, or are suspected of containing, hazardous material. Be sure to include enough material to absorb all of the liquid in the shipment if sample leakage occurs.

f. Use suitable packing materials (bubble wrap is preferred) to prevent breakage of samples.

(1) Wrap each glass container with enough suitable packing material to prevent contact with other containers or the outer box.

(2) Seal small vessels containing liquids in plastic bags or aluminum foil depending on the analysis requested. For example, biological samples for pesticide analyses require aluminum foil, while biological samples for metals require plastic bags. This practice ensures sample integrity and prevents contamination of an entire shipment if a sample leaks.

g. Use a cooler and refrigerants to maintain the samples at the temperature prescribed by the sampling and analysis procedure. Refer to Table 7-2 to determine the amount of refrigerant sufficient to achieve 4 ^{o}C +/- 2 ^{o}C.

.

When shipping in a cooler and using refrigerant to maintain the samples at the temperature prescribed by the sampling and analysis procedure—

- Pre-cool shipping coolers before shipping.
- Use ice as a refrigerant. Ice must be sealed in heavy double-layered plastic bags to prevent leakage as it melts. Zip-lock type freezer bags are recommended because of their extra thickness.
- Use pre-frozen gel blocks when extended refrigeration is required. Do not allow blocks to come in direct contact with the samples.
- Use dry ice only when special sample requirements require its use. Verify shipping regulations before shipping samples.

CAUTION—Short Term (24-48 hours)

TABLE 7-2. REFRIGERANT REQUIREMENTS

CONTAINER SIZE	POUNDS OF PRE-FROZEN GEL BLOCKS	HOURS MAINTAINED BETWEEN 3.5 – 5.5 °C
Small [½ pint (pt)]	3.5	111
Medium (1 pt)	7.5	116
Large [1 quart (qt)]	18.0	122
Extra Large [1 gallon (gal)]	21.0	120

Note:
All containers should be pre-cooled to 4.0 °C before packing.

7-10. SHIPMENT REQUIREMENTS AND SPECIFICS. Table 7-3 outlines shipping requirements and specifics.

TABLE 7-3. SHIPMENT REQUIREMENTS AND SPECIFICS

STANDARD ANALYSIS SAMPLES	**CAN BE SENT BY:** • Priority First-Class mail • Certified U.S. Mail **Do Not Send Hazardous Materials by U.S. Mail.** **Do Not Use Registered Mail Since It Is Not Delivered Directly To Building E2100** • Commercial carriers, such as **FedEx** or **UPS** • Hand carried to Building E2100, Aberdeen Proving Ground (APG), Edgewood Area
PRIORITY SAMPLE OR SHIPMENTS CONTAINING SAMPLES: • With short-holding times • That must be kept refrigerated or frozen	**MUST BE:** • Shipped by overnight express (**FedEx** or **UPS**) or • Hand carried to Building E2100, APG, Edgewood Area
FEDEX SPECIFICS	• Packages shipped overnight arrive by 1200 the next day • Samples cannot be picked up on Sunday • Samples sent on Friday will be delivered Monday, unless the shipment is clearly marked "Saturday Delivery"
SHIPMENTS ARRIVING OUTSIDE OF NORMAL SERVICE HOURS (M-F, 0800–1630)	**Require advance arrangements with AIPH-LS before the samples are shipped**
SHIPMENTS MUST COMPLY WITH ALL APPLICABLE REGULATIONS	• Department of Transportation (DOT) • State and Local Governments • Hazardous Waste • Radiochemical • Biohazard

IF SHIPPING FROM OCONUS—

- Shipment will have to go through customs, so expect potential delays.
- List the contents as "Laboratory Samples."
- Label the shipment as "Property of the U.S. Government."
- Contact the nearest USAPHC Laboratory for assistance, if needed.

7-11. PROJECT PLANNING/SAMPLE SUBMISSION CHECKLIST

A suggested project planning/sample submission checklist is shown in Figure 7-2.

PROJECT PLANNING/SAMPLE SUBMISSION CHECKLIST

PLANNING PHASE

_____ Contact an AIPH-LS consultant to discuss sampling plan, DQOs, Quality Assurance Project Plan, etc.

_____ Complete LIDS 330 for environmental projects or the LIDS 9 for industrial hygiene (IH) sampling, and forward the request for services to the "Sampnews" mailbox.

_____ Review laboratory replies to your analytical request. Communicate questions or problems through the "Sampnews" mailbox and the Consultants Office.

_____ Notify AIPH-LS and the consultant, via the "Sampnews" mailbox, of any changes or delays in your initial plan.

_____ Await contact from AIPH-LS for the pick-up of your sample containers or notification of container shipment, per your request.

ON-SITE

_____ Notify AIPH-LS and the consultants, via the "Sampnews" mailbox or telephone, of any changes to project plans, delays, or problems.

_____ Preserve, label, and carefully pack samples. (Consult paperwork/instructions enclosed with sample kit.)

_____ Complete Chain-of-Custody Record (LIDS 235) detailing the contents of each cooler, and include this paperwork with each cooler.

_____ Notify Sample Management Laboratory (SML) or lab consultant when lab samples shipped. This notification could be via an e-mail message to the "Sampnews" mailbox, a fax, or a telephone call to the Consultants Office. Where possible, include copies of the packing list and indicate the number of coolers being shipped.

_____ Verify entire shipment has been received by the lab. Contact SML from the field to verify the condition of the samples upon receipt and confirm that all shipments have been received. (This is especially important if several shipments have been made.) Within a week of sampling, the SML will send an e-mail message to verify sample receipt and document their condition upon arrival.

FIGURE 7-2. PROJECT PLANNING/SAMPLE SUBMISSION CHECKLIST (SAMPLE)

7-12. CHAIN OF CUSTODY

a. The policy is that the COC is project specific and that the project officer determines which projects are to be under the COC.

b. The requirements for COC needs to be indicated on LIDS 330 when submitting a request to AIPH-LS. For the project officer, the COC starts with sample collection.

(1) When shipping, a seal must be placed on the cooler or container being sent to the laboratory. An unbroken seal will indicate that the samples were not tampered with in shipment.

(2) The returning samples will be maintained under a COC in the laboratory.

c. Appendix B contains a copy of a LIDS 235 that must be completed by the project officer.

d. Table 7-4 contains a list of frequently asked questions on COC.

TABLE 7-4. FREQUENTLY ASKED QUESTIONS ON CHAIN OF CUSTODY

QUESTION	ANSWER
WHAT IS COC?	1. A procedure that provides accountability and documentation of sample integrity from the receipt of the sample in LS until disposal or consumption. A sample is in someone's "custody" if: a. It is in one's actual physical possession; b. It is in one's view, after being in one's physical possession; c. It is one's physical possession and then locked up so that it can't be tampered with; d. It is kept in a secured area, restricted to authorized personnel only. 2. This sample will include both original sample and prepared aliquot(s). 3. This procedure represents a means to establish a reasonable probability that: a. This COC record is supportable if the necessity arises. b. The sample that was collected is the same sample that was analyzed, reported, and disposed. c. The sample was not altered, changed, or otherwise compromised.
IS THERE AN AIPH-LS SOP COVERING COC?	Yes, it is LS SOP #5 and is available to all employees on the intranet. All of our Quality System documentation can be accessed from the LS home page.
DO ALL SAMPLES REQUIRE HANDLING UNDER COC?	No. Samples are usually handled under COC if there is a possibility that the results may be used in litigation.

TABLE 7-4. FREQUENTLY ASKED QUESTIONS ON CHAIN OF CUSTODY (CONT)

QUESTION	ANSWER
WHO DECIDES IF SAMPLES ARE TO BE HANDLED UNDER COC?	The project officer or, in the case of mail-ins, the sample submitter.
HOW IS COC HANDLED IN AIPH-LS?	1. Original field COC forms together with the sample(s) are received in SML. The original field form(s) is/are maintained in SML. 2. Internal COC form(s) is/are created in SML, transferred with the sample(s) to respective Division/Team laboratories, signed, and date/time stamped to show transfer of the samples. 3. The Division/Team sample custodian will sign and time/date stamp the form to show acceptance of the samples and store them in a secure storage area. 4. When the samples are needed for analysis, the sample custodian shall relinquish custody to the analyst by signing and placing the time and date and reason for relinquishing custody on the internal COC form. 5. The analyst shall accept custody of the samples from the sample custodian by signing the block provided on the internal COC form and filling in the time, date, and reason for transfer of custody. 6. Division records generated (analyst's notebooks, project files, and/or work list) will establish any additional custody requirements throughout that Division.

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APPENDIX A

REFERENCES

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REFERENCES

1. U.S. Environmental Protection Agency. 1991. Contract Laboratory Program: *User's Guide to the Contract Laboratory Program*, EPA/540/P-91/002, Office of Emergency and Remedial Response, Environmental Protection Agency, Washington DC.

2. U.S. Environmental Protection Agency. July 1993. Contract Laboratory Program: *Statement of Work for Organic Analysis*, Multi-media, Multi-Concentration, Document OLMO 1.0-OLMO 1.9.

3. U.S. Environmental Protection Agency. 1992. Contract Laboratory Program: *Statement of Work for Inorganic Analysis*, Multi-media, Multi-Concentration, Document ILMO 2.0-ILMO 3.0.

4. U.S. National Archives and Records Administration. *Code of Federal Regulations*. Title 40, Part 122, EPA Administered Permit Programs: *The National Pollutant Discharge Elimination System*, August 2010.

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6. U.S. National Archives and Records Administration. *Code of Federal Regulations*. Title 40, Part 261, Identification and Listing of Hazardous Waste, August 2010.

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15. *Standard Methods for the Examination of Water and Wastewater*, 21st Edition, American Public Health Association, American Water Works Association, Water Environment Federation, 2005.

16. U.S. Environmental Protection Agency. *Test Methods for Evaluating Solid Waste:* Physical/Chemical Methods, EPA/SW-846, Current Version. http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm.

17. U.S. Army Public Health Command. 2011. Technical Guide 211, *Radiobioassay Collection, Labeling, and Shipping Requirements*.

18. U.S. Army Public Health Command. *U.S. Army Institute of Public Health-Laboratory Sciences Quality Assurance Manual*.

19. U.S. Army Public Health Command. 2011. Technical Guide 141, *Industrial Hygiene Sampling Guide.*

APPENDIX B

SAMPLE AIPH-LS LABORATORY INFORMATION DOCUMENT SYSTEM (LIDS)

Figure B-1. LIDS 330, Request for Laboratory Services

Figure B-2. LIDS 9, Industrial Hygiene Sample Submission Form

Figure B-3. LIDS 235, Chain of Custody Record

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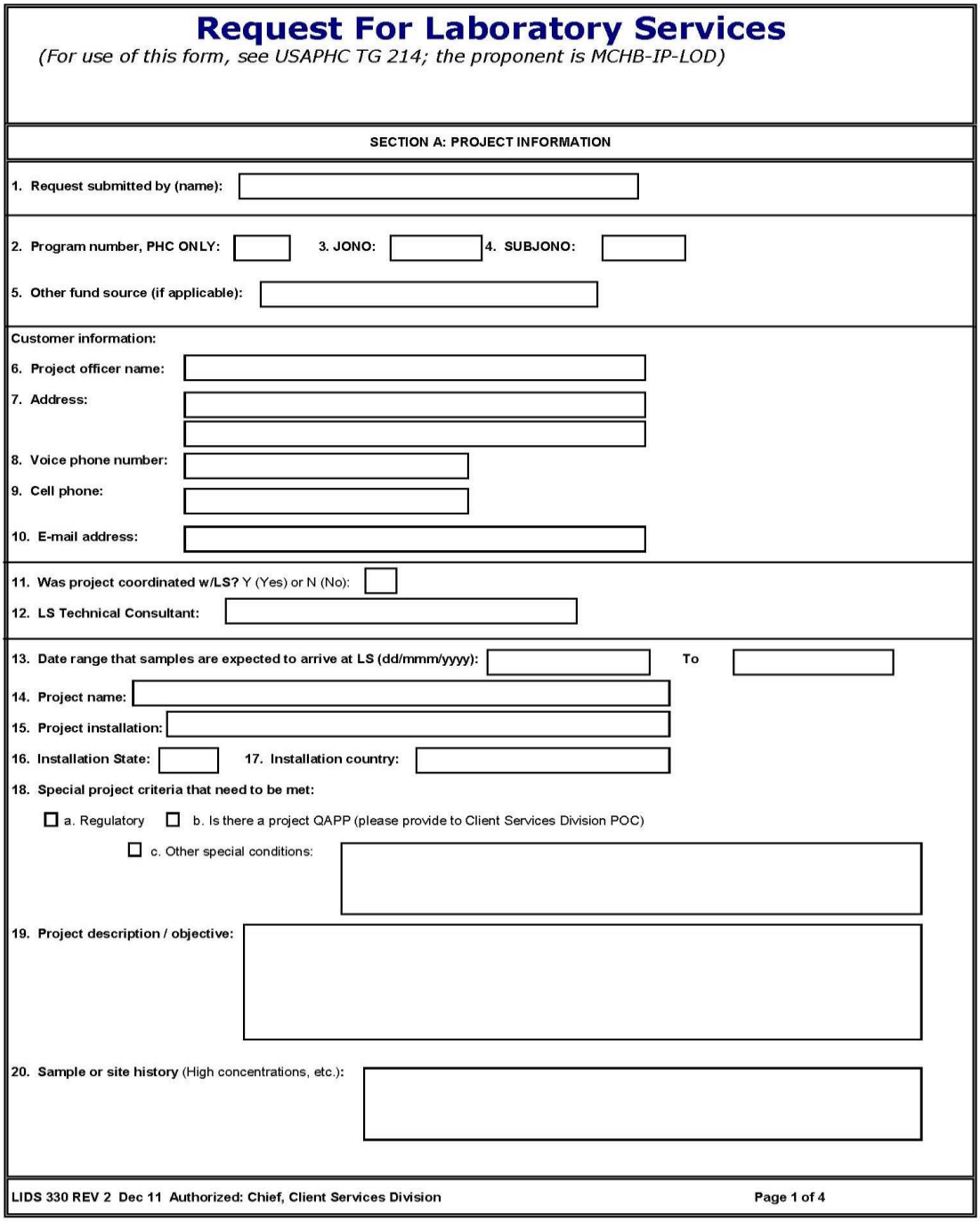


Request For Laboratory Services

(For use of this form, see USAPHC TG 214; the proponent is MCHB-IP-LOD)

SECTION A: PROJECT INFORMATION

1. Request submitted by (name):

2. Program number, PHC ONLY: 3. JONO: 4. SUBJONO:

5. Other fund source (if applicable):

Customer information:

6. Project officer name:

7. Address:

8. Voice phone number:

9. Cell phone:

10. E-mail address:

11. Was project coordinated w/LS? Y (Yes) or N (No):

12. LS Technical Consultant:

13. Date range that samples are expected to arrive at LS (dd/mmm/yyyy): To

14. Project name:

15. Project installation:

16. Installation State: 17. Installation country:

18. Special project criteria that need to be met:

☐ a. Regulatory ☐ b. Is there a project QAPP (please provide to Client Services Division POC)

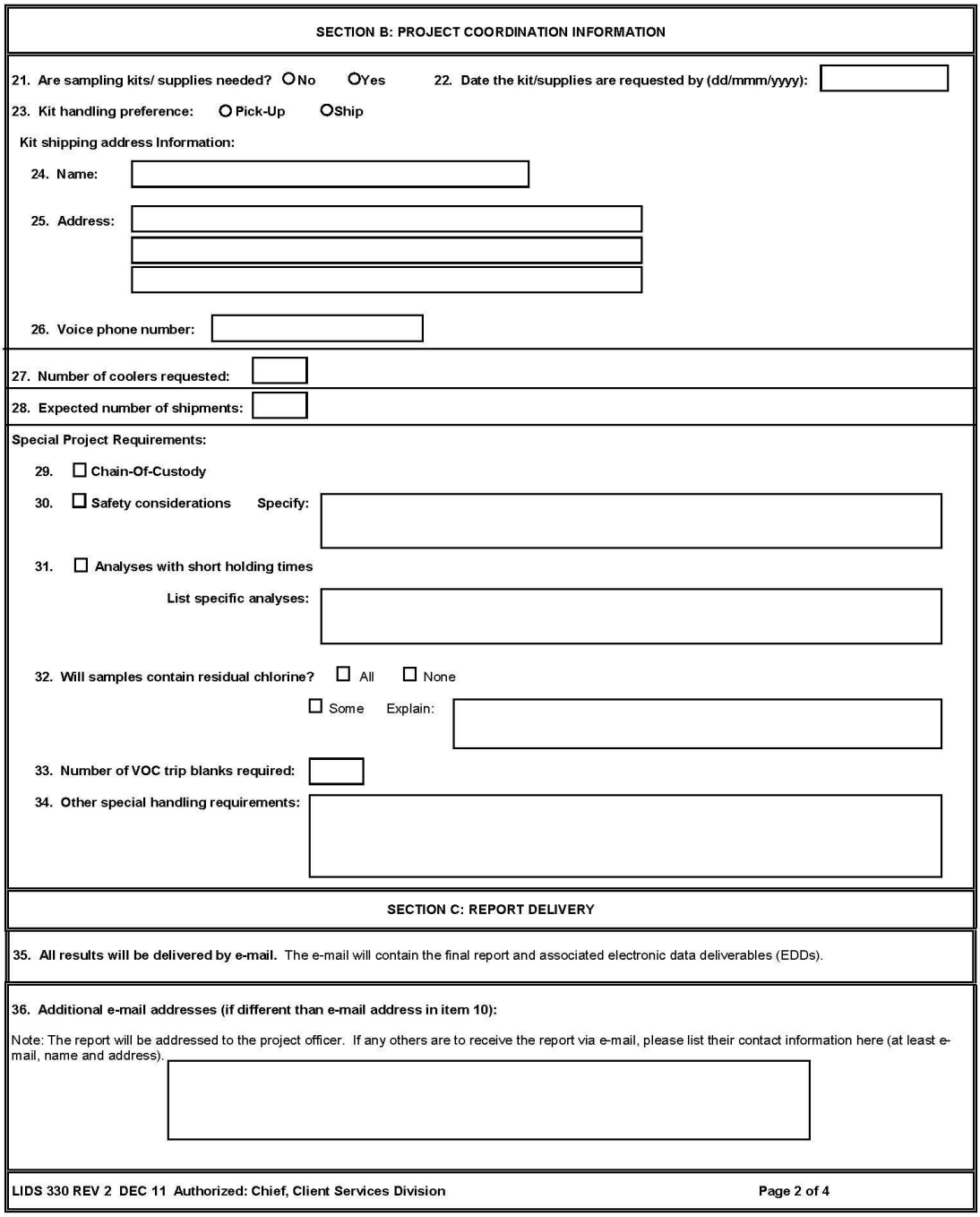
☐ c. Other special conditions:

19. Project description / objective:

20. Sample or site history (High concentrations, etc.):

LIDS 330 REV 2 Dec 11 Authorized: Chief, Client Services Division Page 1 of 4

FIGURE B-1. SAMPLE LIDS 330, REQUEST FOR LABORATORY SERVICES



SECTION B: PROJECT COORDINATION INFORMATION

21. Are sampling kits/ supplies needed? O No O Yes 22. Date the kit/supplies are requested by (dd/mmm/yyyy):

23. Kit handling preference: O Pick-Up O Ship

Kit shipping address Information:

24. Name:

25. Address:

26. Voice phone number:

27. Number of coolers requested:

28. Expected number of shipments:

Special Project Requirements:

29. ☐ Chain-Of-Custody

30. ☐ Safety considerations Specify:

31. ☐ Analyses with short holding times

List specific analyses:

32. Will samples contain residual chlorine? ☐ All ☐ None

☐ Some Explain:

33. Number of VOC trip blanks required:

34. Other special handling requirements:

SECTION C: REPORT DELIVERY

35. **All results will be delivered by e-mail.** The e-mail will contain the final report and associated electronic data deliverables (EDDs).

36. Additional e-mail addresses (if different than e-mail address in item 10):

Note: The report will be addressed to the project officer. If any others are to receive the report via e-mail, please list their contact information here (at least e-mail, name and address).

LIDS 330 REV 2 DEC 11 Authorized: Chief, Client Services Division Page 2 of 4

FIGURE B-1. SAMPLE LIDS 330, REQUEST FOR LABORATORY SERVICES (CONT)

SECTION D: TURN AROUND TIME REQUESTED

37. Priority Requested: O Standard – (28 calendar days) O High – (14 calendar days) O Top – (7 calendar days)

Or Requested Due Date (dd/mmm/yyyy): ____

SECTION E: ANALYSIS REQUESTED

38. a. LS Acode (Optional)	b. Analyte/Parameter	c. Method	d. Matrix	e. Quantity	f. Comments

Additional comments:

Phone number to contact the LS Client Services Division: 410-436-2208

LIDS 330 REV 2 DEC 11 Authorized: Chief, Client Services Division Page 3 of 4

FIGURE B-1. SAMPLE LIDS 330, REQUEST FOR LABORATORY SERVICES (CONT)

SECTION F: INSTRUCTIONS FOR COMPLETING A REQUEST FOR LABORATORY SERVICES (IF CLARIFICATION NEEDED)

Section 2. Program number: Internal PHC-AIPH customers should list the program number with which the project is associated. External PHC-AIPH customers list program number as 00.

Section 3. JONO: An internal PHC-AIPH Accounting Number. For internal PHC-AIPH customers, indicate the SUBJONO assigned to your project. PHC-AIPH external customers use X7G003.

Section 4. SUBJONO: An internal PHC-AIPH Project Job Number. For internal PHC-AIPH customers, indicate the SubJono assigned to your project for laboratory analysis. PHC-AIPH external customers use 1236.

Section 5. Other fund source: (If not identified in JONO, SUBJONO).

Section 13. Date range that samples are expected to arrive At LS: List the date (dd/mmm/yyyy - 12 Dec 2000) you expect LS to receive your samples. Note: Prior arrangements must be made with LS-SML for sample delivery outside of the routine (M-F, 0730-1600hrs) duty hours. This requirement includes weekend and holiday deliveries.

Section 14. Project name: List the name of project as referred to in your project plan.

Section 15. Project installation: The installation or site where sampling is occurring.

Section 19. Project description/objective: Write a brief description of the primary project objective. Indicate whether the samples are being analyzed for screening, monitoring, regulatory compliance, or health concern purposes.

Section 20. Sample or site history: Write a brief statement indicating any pertinent sample or site histories that LS staff members should be aware of when analyzing the samples.

Section 23. Kit handling preference: Indicate whether the sample containers will be picked-up or request that LS ship sample containers to a specific location. If selecting the shipping option provide address (no P.O. Boxes) and a telephone number at the shipping destination.

Section 27. Number of coolers requested: Indicate the number of cooler(s) that need to be shipped by LS to the project site.

Section 28. Expected number of shipments: Indicate the number of sample shipments planned to the laboratory (include direct shipment to LS contract labs).

Section 29. Chain-of-Custody (COC): Check here if project requires COC. COC is legal documentation of the possession and handling of a sample from the time of collection until final disposition.

Section 30. Safety considerations: Briefly list the known associated hazardous and safety requirements for the samples. If available, provide LS with an MSDS on the samples (e.g., see MSDS, use Personal Protective Equipment (PPE) when handling samples, etc.).

Section 31. Analyses with short holding times: List the analysis(es) that have less than 7 days holding times (e.g., BOD, Conductivity, pH; Encore Samples, Coliform, etc.). Holding time is the elapsed time from the date of sample collection until the initiation of the analytical procedure.

Section 32. Will samples contain residual chlorine? Drinking water samples, for example, usually contain residual chlorine. Please specify.

Section 33. Note: Volatile organic compound analyses require that trip blanks be included in the sample kit. If applicable, list the number required.

Section 34. Other special handling requirements: In addition to those described above.

Section 36. Additional e-mail addresses: (If different than, or in addition to e-mail address in item 10). Note that the report will be sent to the project officer. If any others are to receive the report via e-mail, please list their e-mail information here.

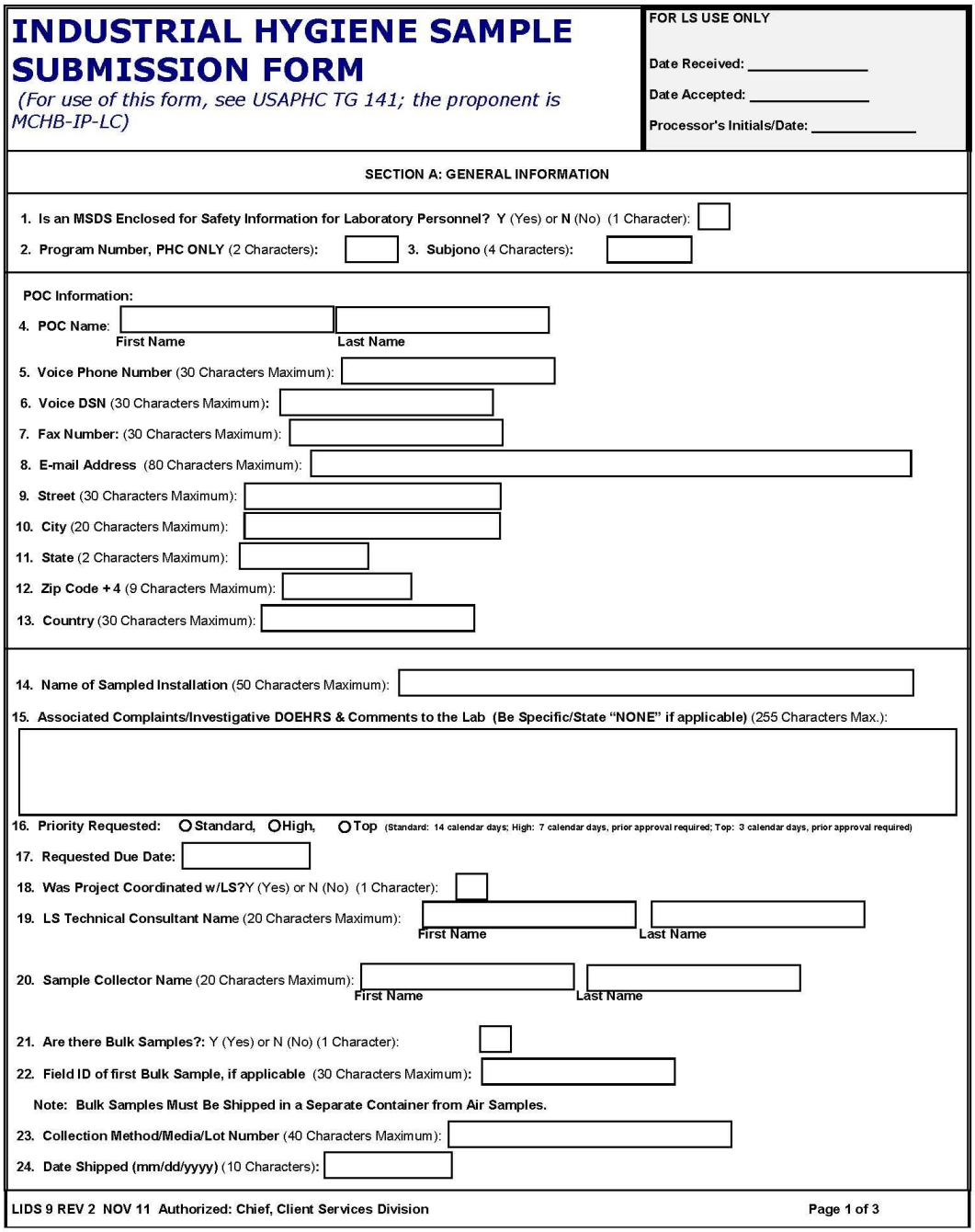
Section 37. Priority requested: Select the priority you would like for your project. Note: Turn-around-time is calculated using calendar days from date of sample receipt at the laboratory. Samples are routinely processed as Standard Priority. High-Priority and Top Priority requests require coordination with LS and are subject to surcharges. Requesting a nonstandard due date requires pre-approval, and a surcharge may be applied.

Section 38. Analytical request table: List in the table the analysis(es) requested for the project. If more than 25 analyses will be requested, reuse page 3.

a. LS Acode (optional) - LS analytical procedure code (if known).
b. Analyte/Parameter - Analysis name or abbreviation (e.g., Turbidity, VOCs, Lead, etc.).
c. Method - List the standard method number (e.g., NIOSH 1501, EPA 200.7, ASTM 1613, etc.).
d. Matrix - The predominant material of which the sample to be analyzed (e.g., Drinking Water (D), Water (W), Waste Water (WW), Soil/Sediment/Sludge (S), Air (A), Bulk (B), Wipe (WI), Biological Liquid (BL), Biological Solid (BS), Paint Chip (P), Oil (O), Metal Fragment (F), etc.).
e. Quantity - The number of samples to be analyzed for each method and matrix.
f. Comments - List any specific special comments or special supplies needed for each method and matrix (e.g., blanks, extra containers, preservatives forms etc.). List individual metals here.

LIDS 330 REV 2 DEC 11 Authorized: Chief, Client Services Division	Page 4 of 4

FIGURE B-1. SAMPLE LIDS 330, REQUEST FOR LABORATORY SERVICES (CONT)



INDUSTRIAL HYGIENE SAMPLE SUBMISSION FORM

(For use of this form, see USAPHC TG 141; the proponent is MCHB-IP-LC)

FOR LS USE ONLY

Date Received: _____

Date Accepted: _____

Processor's Initials/Date: _____

SECTION A: GENERAL INFORMATION

1. **Is an MSDS Enclosed for Safety Information for Laboratory Personnel?** Y (Yes) or N (No) (1 Character):
2. **Program Number, PHC ONLY** (2 Characters): 3. **Subjono** (4 Characters):

POC Information:

4. **POC Name**: First Name Last Name
5. **Voice Phone Number** (30 Characters Maximum):
6. **Voice DSN** (30 Characters Maximum):
7. **Fax Number:** (30 Characters Maximum):
8. **E-mail Address** (80 Characters Maximum):
9. **Street** (30 Characters Maximum):
10. **City** (20 Characters Maximum):
11. **State** (2 Characters Maximum):
12. **Zip Code + 4** (9 Characters Maximum):
13. **Country** (30 Characters Maximum):

14. **Name of Sampled Installation** (50 Characters Maximum):
15. **Associated Complaints/Investigative DOEHRS & Comments to the Lab (Be Specific/State "NONE" if applicable)** (255 Characters Max.):
16. **Priority Requested:** O Standard, O High, O Top (Standard: 14 calendar days; High: 7 calendar days, prior approval required; Top: 3 calendar days, prior approval required)
17. **Requested Due Date:**
18. **Was Project Coordinated w/LS?** Y (Yes) or N (No) (1 Character):
19. **LS Technical Consultant Name** (20 Characters Maximum): First Name Last Name
20. **Sample Collector Name** (20 Characters Maximum): First Name Last Name
21. **Are there Bulk Samples?:** Y (Yes) or N (No) (1 Character):
22. **Field ID of first Bulk Sample, if applicable** (30 Characters Maximum):

Note: **Bulk Samples Must Be Shipped in a Separate Container from Air Samples.**

23. **Collection Method/Media/Lot Number** (40 Characters Maximum):
24. **Date Shipped (mm/dd/yyyy)** (10 Characters):

LIDS 9 REV 2 NOV 11 Authorized: Chief, Client Services Division Page 1 of 3

FIGURE B-2. SAMPLE LIDS 9, INDUSTRIAL HYGIENE SAMPLE SUBMISSION

SECTION B: ANALYSIS INFORMATION

NOTE: 1) ALL SAMPLES IN SECTION C WILL BE ANALYZED FOR ALL THE TESTS INDICATED IN THIS SECTION.

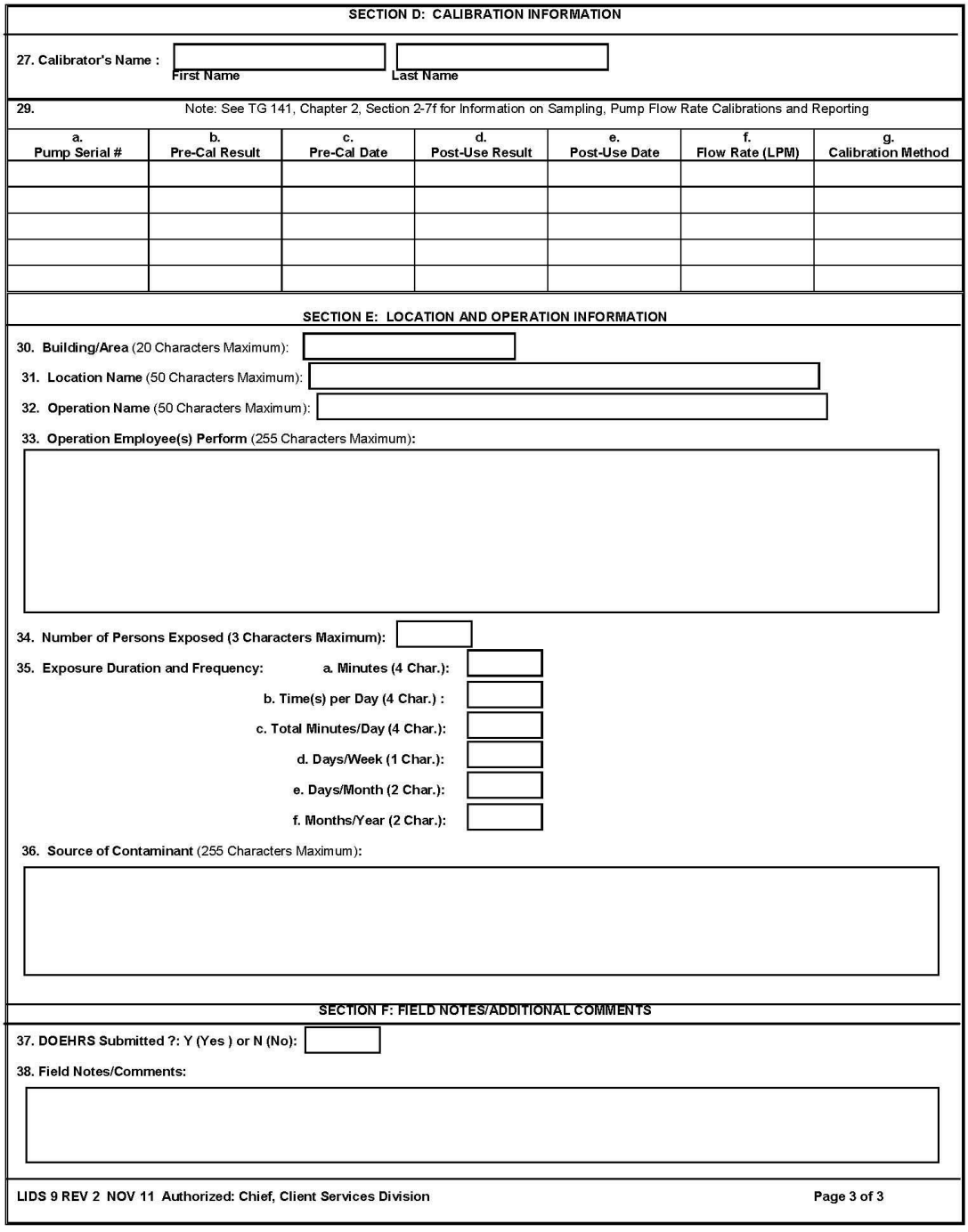
25.	Analysis Requested

SECTION C: SAMPLE INFORMATION
NOTE: ALL SAMPLES WILL BE ANALYZED FOR ALL THE TESTS INDICATED IN SECTION B.

26. a. Field Sample ID#	b. Spl Type: Bulk/ GA/ BZ*	c. Date Collected	d. Employee ID	e. Pump Serial #	f. Pump Time On	g. Pump Time Off	h. Total Time (Minutes)	i. Flow Rate (LPM)	j. Total Volume(L) [Flow Rate X Total Time]
					B	L	A	N	K

*GA: General air sample; BZ: Breathing zone

FIGURE B-2. SAMPLE LIDS 9, INDUSTRIAL HYGIENE SAMPLE SUBMISSION (CONT)



SECTION D: CALIBRATION INFORMATION

27. Calibrator's Name : First Name Last Name

29. Note: See TG 141, Chapter 2, Section 2-7f for Information on Sampling, Pump Flow Rate Calibrations and Reporting

a. Pump Serial #	b. Pre-Cal Result	c. Pre-Cal Date	d. Post-Use Result	e. Post-Use Date	f. Flow Rate (LPM)	g. Calibration Method

SECTION E: LOCATION AND OPERATION INFORMATION

30. **Building/Area** (20 Characters Maximum):

31. **Location Name** (50 Characters Maximum):

32. **Operation Name** (50 Characters Maximum):

33. **Operation Employee(s) Perform** (255 Characters Maximum):

34. Number of Persons Exposed (3 Characters Maximum):

35. Exposure Duration and Frequency:
- a. Minutes (4 Char.):
- b. Time(s) per Day (4 Char.) :
- c. Total Minutes/Day (4 Char.):
- d. Days/Week (1 Char.):
- e. Days/Month (2 Char.):
- f. Months/Year (2 Char.):

36. **Source of Contaminant** (255 Characters Maximum):

SECTION F: FIELD NOTES/ADDITIONAL COMMENTS

37. DOEHRS Submitted ?: Y (Yes) or N (No):

38. Field Notes/Comments:

LIDS 9 REV 2 NOV 11 Authorized: Chief, Client Services Division Page 3 of 3

FIGURE B-2. SAMPLE LIDS 9, INDUSTRIAL HYGIENE SAMPLE SUBMISSION (CONT)

Directions for the LIDS 9

Back to LIDS 9

Section A:

The new LIDS 9 version in section A works just like the previous version except for the dates entries. For items 17 and 24, click on the text of the item to pop up the calendar. Use the calendar to find the date you wish to set, once the date is chosen click on it and the calendar will go away and you will see the date selected in the textbox for that item. Item 23 is required, the form will not process unless you provide a value for "Collection Method".

Please pay attention to the items that have the * next to them. These are required fields and the form cannot be processed without them being filled out and some cases they require a proper format to be followed also beware of the field sizes. In order to prevent information from being truncated, make sure that the field size next to the item is followed.

Section B:

In Section B, please enter the appropriate data for columns of the table and then click the ADD button on the row to add the data to the table. If you need to edit the data, click edit for the row you wish to edit. An Update button along with a Cancel button appears, make the appropriate changes to fields you wish to edit and then when you are finish click the Update button and the data will be altered. You can add as many items to this table as needed.

Section C:

In Section C, please enter the appropriate data for columns of the table and then click the ADD button on the row to add the data to the table. Pay close attention to the date column. It follows a set format “dd/mm/yyyy “and it is required along with the field called “Field Sample”. If you need to edit the data, click edit for the row you wish to edit. An Update button along with a Cancel button appears, make the appropriate changes to fields you wish to edit and then when you are finish click the Update button and the data will be altered. You can add as many items to this table as needed.

Section D:

In Section D, please pay attention to the size restrictions listed on all fields. Pay close attention to the date columns. They follow a set format “dd/mm/yyyy “. If you need to edit the data, click edit for the row you wish to edit. An Update button along with a Cancel button appears, make the appropriate changes to fields you wish to edit and then when you are finish click the Update button and the data will be altered. You can add as many items to this table as needed.

Directions for the LIDS 9 (CONT)

Section E:

In Section E, please enter the appropriate data while keeping the item's size restriction in mind. There are no required fields in this section.

Section F:

In Section F, there are only two data items to be concerned about. Please keep in mind the size restrictions of the "Field Notes" item. In order to submit the data, click the Submit button and if the fields of the form are properly filed out the form will be submitted for process. Someone from PHC will be back to you shortly with the status of your submission. You can "Print" your form if you wish by clicking on the print button.

CHAIN OF CUSTODY RECORD

INSTALLATION - ____________________
PROJECT NUMBER - ____________________
PROJECT OFFICER - ____________________
TURN AROUND TIME - (PLEASE X ONE)
____ **STD (28 CALENDAR DAYS)** ____ **HIGH (14 CAL. DAYS)** _____ **TOP (7 CAL. DAYS)**

PRESERVATIVE (See Codes)

ANALYSIS REQUESTED

FIELD SAMPLE ID	DATE SAMPLED	TIME SAMPLED	Grab	Comp	Matrix (See codes)	No. of Containers											

<- Total Number of Containers

Shipment Method - ____________________ **Date Shipped-**______________

Relinquished By:	Date & Time	Accepted By:	Date & Time	Comment/Remarks

MATRIX CODES: Air(**A**); Biological Liquid(**BL**); Biological Solid(**BS**); Bulk(**B**); Drinking Water(**D**); Frag.(**F**); Oil(**O**); Paint Chip(**P**); Soil/Sediment/Sludge(**S**); Waste Water(**WW**); Water(**W**); Wipe(**WI**)
PRESERVATIVE CODES: 4C - Ice only **H** - HCl+ice **N** - HNO3+ice **S** - H2SO4+ice **Na** - NaOH+ice **AA** - Ascorbic Acid **O** - Other (specify)

FIGURE B-3. SAMPLE LIDS 235, CHAIN-OF-CUSTODY RECORD

Guidance and Instructions for Filling out LIDS 235

Field Personnel: The sample collector is responsible for assuring that proper COC requirements are met during collection of environmental and occupational health sample(s). Field personnel have the responsibility to notify the laboratory prior to shipment that incoming samples are being submitted under COC. All actions associated with COC will be documented on COC documents in the field; information which is assigned to each field sample must include the following:

Source/installation where sample was collected.
Date and time of collection of field sample.
Field assigned sample I.D. number.
Analyses desired for sample.
Sample collector's name.
USAPHC Project Number (if applicable).
Total number of containers per sample.
Date of shipment of sample to laboratory.
Method of shipment (e.g. UPS, Federal Express, hand delivered).
Preservative used, if applicable.

When transferring the "possession" of the container to the next party, i.e. laboratory personnel, the transferring official will sign and record the date/time of transfer on the COC document(s) included with each group of sample(s) for each transportation container. The original COC document(s) must be placed in a sealed plastic bag to prevent wetting and placed inside the respective sample's shipping container. They must also write the name of the carrier (FedEx, UPS, etc) in the "Relinquished to" box of the COC. Transportation containers will then be sealed with tamper proof shipping tape and forwarded to the laboratory for subsequent analyses. This USAPHC COC document (LIDS 235) can also be viewed and obtained at the USAPHC public website @ http://phc.amedd.army.mil/topics/labsciences/lsm/Pages/LIDS.aspx

Lab Personnel: Unless hand carried, transportation containers must be shipped to the laboratory via common carrier (UPS, Federal Express, etc.). Common carriers should abide by Department of Transportation regulations governing shipment of COC sample(s). Upon receipt of containers from a common carrier or from the customer, COC shall be relinquished to the laboratory sample receiving area. Any evidence of tampering (e.g. breakage of seal) during shipment by common carrier must be documented upon receipt and inspection of transportation containers by sample receiving personnel during duty hours or by those individuals assigned such responsiblity during non-duty hours. Responsible off-duty personnel shall follow guidelines of the non-duty sample receipt policy. As soon as sample(s) is/are transferred to analytical laboratory personnel, custody must be formally relinquished to them. If, for any reason, the chain is broken between transfer of sample(s) from field to sample receiving/responsible off-duty personnel, or from transfer of sample(s) from sample receiving/responsible off-duty personnel to the laboratory, a contingency plan will be implemented to determine cause of breakage of chain and to perform corrective action to reconstruct chain, if possible.

LIDS 235 REV 3 DEC 11 Authorized: Section Chief, SML **PAGE 2 OF 2**

FIGURE B-3. SAMPLE LIDS 235, CHAIN-OF-CUSTODY RECORD (CONT)

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GLOSSARY

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GLOSSARY

SECTION I–ABBREVIATIONS

A2LA	American Association for Laboratory Accreditation
Acode	Analytical Test Code
AIHA	American Industrial Hygiene Association
AOAC	Association of Official Analytical Chemists
APG	Aberdeen Proving Ground
BOD	Biological Oxygen Demand
CFR	Code of Federal Regulations
CLIP	Clinical Laboratory Improvement Program
COC	Chain of Custody
COLA	Commission on Office Laboratory Accreditation
CONUS	Continental United States
DOD	Department of Defense
DOT	Department of Transportation
DQO	Data Quality Objective
DSN	Defense Switched Network
ELLAP	Environmental Laboratory Lead Accreditation Program
FedEx	Federal Express
ID	Identification
IH	Industrial Hygiene
ISO	International Organization of Standardization
JONO	Job Order Number
LIMS	Laboratory Information Management System
LPC	Laboratory Project Coordinator
LS	Laboratory Sciences

MBAS	Methylene Blue Active Substances
MSDS	Material Safety Data Sheets
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NVLAP	National Volunteer Laboratory Accreditation Program
OCONUS	Outside Continental United States
PAT	Proficiency Analytical Testing
PE	Performance Evaluation
QC	Quality Control
SOP	Standing Operating Procedure
SML	Sample Management Laboratory
TAT	Turnaround Time
TG	Technical Guide
UPS	United Parcel Service
USAPHC	U.S. Army Public Health Command
USEPA	U.S. Environmental Protection Agency

SECTION II–TERMS

Acode
An analytical test code (Acode) (formerly called the DLS Test Code) is a unique number assigned by the AIPH-LS to each procedure.

analyte
The element or compound an analyst seeks to determine or measure; the compound of interest.

batch
A group of samples prepared at the same time in the same location using the same method.

blank
An artificial sample designed to monitor the introduction of artifacts or contamination into the analytical process. The blank is taken through the appropriate steps in the analytical process. Trip, field, equipment, and reagent blanks are examples of different kinds of blanks.

chain-of-custody (COC)
Legal documentation of the possession and handling of a sample from the time of collection until final disposition.

Code of Federal Regulations (CFR)
A codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government.

Data Quality Objective (DQO)
A statement defining a desired expectation for the data produced by the laboratory. The USEPA developed DQOs as total quality management tools to facilitate the planning of environmental data collection activities.

duplicate samples
Samples collected simultaneously from the same source, under identical conditions, into separate containers. They are analyzed independently.

environmental sample
A representative sample of any material (aqueous, nonaqueous, or multimedia) collected from any source for which determination of composition or contamination is requested or required. Different classifications of environmental samples include drinking water (potable water), water/wastewater, sludges and sediments, soils, and solid wastes.

expenditure order (XO)
A USAPHC accounting number that shows whom is responsible for funding.

hazardous material
Any substance having the potential to cause a physical or health hazard. This is based on its potential for burning, exploding, or otherwise causing an injury to workers or the likelihood that exposure will result in acute or chronic health effects among employees.

holding time
The elapsed time from the date of sample collection until the initiation of the analytical procedure. Most holding times for different analytes are mandated by USEPA so the integrity of the analyte of interest is maintained.

matrix
The predominant material of which the sample to be analyzed is composed. Matrix is not synonymous with phase (liquid or solid).

Material Safety Data Sheet (MSDS)
A concise, descriptive chemical data sheet that follows the guidelines established by the Occupational Safety and Health Administration. It serves as the basis for written hazard communication programs.

preservation
Techniques which retard physical and/or chemical changes in a sample after it has been collected.

quality assurance
All planned and systematic actions necessary to ensure that the overall QC program is being effectively implemented and that laboratory data are of the requisite accuracy.

quality control (QC)
A planned system of activities that provides a level of quality that meets the needs of users. It is also the process through which a laboratory measures its performance, compares its performance with standards, and acts on those differences.

quality system
The organizational structures, responsibilities, procedures, activities, capabilities, and resources that together aims to ensure laboratory services satisfy data requirements.

sample
A portion of material to be analyzed that is contained in single or multiple containers and identified by a unique sample number.

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MARCH 2012