



STATEMENT OF QUALIFICATIONS

Analytical Laboratory Services



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INTRODUCTION



Lionville Laboratory Incorporated (LvLI) provides a wide range of analytical services in support of major environmental programs for federal, state, and private enterprise clients with a focus on mixed waste analyses, support to U.S. Department of Defense (DOD) and U.S. Department of Energy (DOE) sites, state/federal Superfund programs, and projects with special (non-routine) analytical needs.

LvLI's large capacity, full-service laboratory located in the Philadelphia, Pennsylvania metropolitan area has been in operation for more than 17 years, and is certified in 22 states. The laboratory regularly participates in performance evaluation programs, and is audited throughout the year by regulatory agencies and clients.

In addition, LvLI has 15 years of experience in the deployment of onsite/mobile laboratories to provide cost-effective and rapid turnaround analytical services tailored to site-specific needs and requirements.

LvLI's Quality Assurance (QA) Program conforms to the requirements of DOD, DOE, U.S. Environmental Protection Agency (EPA) and other state and federal agencies. In addition, the facility is National Environmental Laboratory Accreditation Program (NELAP) accredited, U.S. Army Corps of Engineers (USACE) validated, accepted by the U.S. Navy Installation Restoration QA Program, holds a U.S. Department of Agriculture (USDA) soils permit (allowing the receipt of foreign soil samples), and is licensed by the U.S. Nuclear Regulatory Commission (NRC) to receive and analyze low-level radioactively contaminated samples.

The laboratory operates two shifts six to seven days per week in many of the service areas and employs a staff of 50 qualified professionals. The laboratory is equipped with state-of-the-art instrumentation and sample preparation facilities, which allow the analysis of several thousand water, wastewater, soil, sediment, sludge, and waste samples each month for an extensive array of organic, inorganic, and physical parameters.

LvLI's senior staff has a tremendous amount of experience in environmental analyses, methods development, laboratory QA, and program management. Both management and staff understand the importance of maintaining project schedules and are committed to providing the highest quality chemical analyses and consultation services on schedule.

Laboratory procedures are fully documented, and we maintain formal programs for Health and Safety, Radiation Protection, Waste Handling and Disposal, self-assessment, ethics training, and data archival, thus minimizing liability and risk to our clients.

Our extensive capacity and depth of resources, dedication to QA, many years of management experience, and technical expertise make LvLI the most qualified contractor for your analytical program.

FACILITY AND EQUIPMENT

LvLI operates a 39,000-ft² facility capable of performing thousands of environmental chemical analyses monthly. The laboratory is physically divided into separate work areas to facilitate sample throughput. These areas include: Sample Receipt and Refrigerated Storage, Sample Preparation and Extraction, Glassware Preparation, Organic Extraction, Standards Preparation, Wet Chemical Laboratory, and Instrumentation Laboratories.

The main instrumentation laboratories are: Atomic Absorption (AA) and Inductively Coupled Plasma (ICP) Laboratory, Gas and Liquid Chromatography Laboratory, and Gas Chromatography (GC)/Mass Spectrometry (MS) Laboratory. Each of these laboratories has separate heating, ventilation, and air conditioning systems. Non-destructive GC detectors, GC auto sampler flush solvent, and GC/MS rotary pumps are vented out of the instrumentation laboratories through charcoal filters.

The facility is equipped with state-of-the-art instrumentation and sufficient duplicate equipment to provide back-up service for most major systems. The laboratory maintains service agreements on major instrumentation. These service agreements include the manufacturers' preventive maintenance at periodic intervals (e.g., quarterly, semi-annually) and emergency services for major equipment with contract-required responses within 24 hours. LvLI also maintains an extensive inventory of critical maintenance and repair parts. All instrumentation is continually monitored for reliable and accurate performance. New technologies and available instrumentation are reviewed periodically, and state-of-the-art capability is maintained by annual capital funding plans.

Table 1. LvLI State-of-the-Art Instrumentation

Type	Quantity
GC/MS, variously configured for volatiles, semi-volatiles, dioxins	8
GC, detectors include ECD, FID, NPD, PID, Hall	16
HPLC, 2 UV detectors, 3 fluorescence detectors, 1 photodiode array detector	3
GFAA units	2
Trace ICP	1
Polyscan ICP	1
Ion Chromatograph	1
TOX Analyzers	3
Liquid Scintillation Counter	1
Gas Flow Proportional Counter	1
Gel Permeation Chromatographs	2
TOC Analyzers	2
Automated Chemical Analyzer	1
Cold Vapor-AA Mercury Analyzers	2

LABORATORY INFORMATION MANAGEMENT SYSTEM

LvLI has in operation an integrated Laboratory Information Management System (LIMS). The LIMS couples a mainframe computer with a custom-designed software system to provide a sophisticated sample tracking and laboratory data management system. LIMS allows the laboratory management staff to immediately access sample status, all available laboratory data, estimated completion date, and other information pertinent to a particular sample.

The LIMS system currently tracks the status of all samples in the laboratories, provides automatic transfer of data from AA/ICP, GC, GC/MS, and High Performance Liquid Chromatography (HPLC) instrumentation and provides reports of analytical data to clients in client-specific formats, including that required by the EPA Contract Laboratory Program (CLP). It also provides a variety of productivity reports and capacity models to the laboratory managers for use in evaluating laboratory performance and loading.

LvLI is currently implementing a state-of-the art, turnkey environmental LIMS that allows for

- Easy and secure access to all necessary laboratory information
- Total customization of reporting and project requirements
- Automation of nearly all tracking, data handling, and reporting.

This hierarchical, Oracle-based LIMS tracks, automates, and controls all processes from contact management and quoting through project and data quality management to report generation and invoicing. In designing the system, we paid particular attention to the current need for complete documentation and control of quality control (QC) data and project/customer-specific QA and technical requirements. The new LIMS will also capture nearly all data, thus eliminating errors arising from hand transfers. The system will facilitate totally automated production of hard copy and electronic deliverables.

LvLI understands the importance of maintaining project schedules and is committed to providing the highest quality chemical analyses and consultation services.

A flexible capacity helps the laboratories meet project commitments. We operate two shifts, seven days per week in many of the service areas. The shifts are either 8 hours or 10–12 hours (particularly in the GC/MS groups), depending on the particular work area. Capacity is expanded through the use of auto-samplers on most instruments.

Peak sample loads are managed using a combination of the following procedures:

- Adding equipment through rental/leasing
- Adding overtime hours—LvLI has the flexibility to pay necessary overtime and provide additional incentives, if necessary, to meet our peak load needs.
- Adding shifts/deploying staff—LvLI has a number of long-time bench analysts that are experienced in more than one unit of the laboratory. Managers routinely utilize this flexibility to meet individual unit loadings.
- Adding staff—LvLI draws from a pool of highly experienced part-time employees (previously full-time) with which we have a continuing relationship.
- Forecasting sample loading—typically peak loads can be anticipated three weeks in advance of sample arrival allowing sufficient time to add resources.
- Turning away work—the majority of LvLI's work is derived from large programs with customers that have contracted multiple laboratories; many of these programs not only allow right of refusal, but encourage it, to maximize on-time delivery.

The routine laboratory capacity presented in Table 2 is based on recent historical production. For unusual tasks or for short periods of high loading, all the departments have the ability to readjust resources to meet a higher sample load.

Table 2. LvLI Routine Laboratory Capacity

Analyses	Samples (monthly)
GC/MS Volatiles	600
GC/MS Semi-volatiles	300
Dioxins	100
Pesticides/Herbicides/PCBs	700
GC VOAs (8010/8020)/Hydrocarbons Profiling	600
Explosives/PAHs (HPLC)	300
TCLP Extractions	250
TOX	350
Wet Chemistry	4,000
ICP Metals (analyses)	16,500
AA Metals (analyses)	3,000
Mercury	850

CERTIFICATIONS, ACCREDITATIONS, AND APPROVALS

LvLI maintains **22 state certifications**, including its home state of Pennsylvania. LvLI's remaining state certifications are with 20 states offering a formal program to out-of-state laboratories. Table 3 shows the LvLI's state approvals.

LvLI is **NELAP-Accredited**, (Pennsylvania for, Safe Drinking Water Act [SDWA] and Florida for Clean Water Act [CWA] and Resource Conservation and Recovery Act [RCRA]). A list of specific analytes for which we are NELAP-approved is available upon request.

Other significant agency approvals maintained by LvLI shown in Table 4 include **USACE**, the **U.S. Navy (Naval Facilities Engineering Service Center)** [NFESC], **NRC** (for receipt and analysis of low-level radioactive samples), and the **USDA**. USDA approval allows our laboratory to accept samples originating from outside the continental U.S.

Table 3. LvLI State Certifications

State	Program Matrix		
	Drinking Water	Non-Potable/ Wastewater	Solid/Hazardous Waste
Alabama	✓	NA	NA
California	✓	✓	✓
Connecticut	✓	✓	✓
Florida	✓	✓	✓
Idaho	✓	NA	NA
Illinois	✓	✓	✓
Indiana	✓	NA	NA
Kentucky	✓	NA	NA
Maryland	✓	NA	NA
Massachusetts	✓	✓	NA
Nevada	✓	✓	NA
New Hampshire	✓	✓	NA
New Jersey	✓	✓	✓
New York	✓	✓	✓*
Pennsylvania	✓	NA	NA
Rhode Island	✓	✓	NA
South Carolina	✓	✓	✓
Tennessee	✓	NA	NA
Utah	✓	✓	✓
Vermont	✓	NA	NA
Virginia	✓	NA	NA
Washington	NA	✓	NA

NA = Not available

* New York also certified for CLP

Table 4. Government and Independent Agency Approvals

NELAP Accreditation	PA for SDWA and FL for CWA and RCRA
NYSDEC	State Superfund
PADEP	State Superfund
USACE	Hazardous, Toxic and Radioactive Waste Program
USDA	Soil Permit
U.S. Navy	Navy Installation Restoration QA Program
U.S. NRC	Radioactive Materials License
U.S. DOE	Integrated Contractor Procurement Team Contract Holder and EMCAP Approved to provide analytical services to for U.S. DOE projects

QUALITY ASSURANCE/QUALITY CONTROL

An essential part of LvLI's service to its clients is our corporate commitment from the "bench" through top management to provide high-quality products and services.

LvLI employs routine QC procedures to ensure that all data generated in the laboratory conform to project/client requirements for accuracy, precision and completeness, and that data are of known quality and legally defensible. In addition, LvLI's systems and procedures for health and safety, waste handling and disposal, ethics training, and documentation are designed to protect our staff and mitigate any liability to our customers. Quality resources are routinely involved in preventing defects and implementing corrective actions that focus on process improvement and problem elimination.

Our QA Department comprises professionals experienced in analytical laboratory techniques and the administration of quality programs. The department

- Performs internal audits and oversees external audit
- Oversees corrective actions
- Reviews data packages and sample discrepancy reports
- Tracks and monitors performance testing samples
- Oversees the collection of Method Detection Limits (MDLs) and production and review of control charts
- Maintains training files
- Conducts quality and ethics training
- Maintains and coordinates production of controlled documents (QA Manual, standard operating procedures [SOPs])
- Tracks and maintains all certifications and agency/customer approvals and certifications.

Our QA Manual and SOPs document the LvLI quality system. LvLI maintains a master listing or index of SOPs that comprise the quality system. The QA Manual provides an outline and structure of the documentation used in the quality system. It may be augmented with other documents such as an ISO 9001 compliance guide and the National Environmental Laboratory Accreditation Program, Chapter 5, *Quality Systems*. The QA Manual is reviewed annually and revised as necessary to remain current with laboratory operations.

PERFORMANCE TESTING PROGRAM PARTICIPATION

LvLI participates in the following **performance testing (PT)** programs:

- EPA Water Pollution (WP), Water Supply (WS), and Discharge Monitoring Report Quality Assurance (DMRQA) (through a private vendor)
- New York State Department of Health (NYSDOH) and other state PT studies
- DOE's Mixed Waste Analyte Performance Evaluation Program (MAPEP)
- USACE performance evaluation
- National Institute for Occupational Safety and Health (NIOSH) Environmental Lead Proficiency Analytical Testing (ELPAT) and Proficiency Analytical Testing (PAT) studies

Additionally, we participate in various client-administered single and double blind programs.

PROJECT MANAGEMENT

It is our standard practice to assign a Project Manager to serve as the single point of contact for each of our clients. The Project Manager, supported by a team of experienced LvLI staff, plans, coordinates, integrates, and monitors project activities. Efficient and effective project management is of prime importance to the successful execution of any contract and in building lasting client relationships. Our Project Managers are involved from project start to finish, from the time of initial client contact, and they are in communication with the client during the entire project. They are available to answer questions or provide additional information after project completion.

Our Project Managers:

- Respond in a timely manner to all requests.
- Interface with project personnel to plan and schedule sample shipments to the laboratory.
- Organize, schedule, and attend onsite/offsite project meetings as necessary or helpful.
- Serve as consultants for field efforts to optimize batch sizes, arrange sample shipment/receipt, and provide bottles and associated materials.
- Communicate the technical requirements to the laboratory staff.
- Monitor conformance of analytical protocols, QA, and data reporting with contract and technical requirements.
- Monitor cost and schedule requirements.
- Secure specialty laboratory capacity, e.g., radiochemistry, as necessary.

Our laboratory Project Managers and Section Managers have a commitment to maintain project schedules with a goal of 100% on-time delivery of quality data packages. If at any time, a delay in the required project turnaround time is anticipated, the Project Manager will immediately contact the client and inform them of the nature of the problem, the corrective action taken, and a revised delivery date for the analytical data report.

DATA DELIVERABLES

LvLI has a dedicated data package production/assembly staff. Members of our Data Management department review each data package for completeness and consistency before presenting it to the Section Managers, Project Managers, and Laboratory Manager for approval.

LvLI provides numerous types of hard copy data deliverables, including:

- Standard commercial data summaries
- CLP/CLP-like
- Client-specified custom formats

LvLI also provides electronic data deliverables (EDDs) for many of our clients. EDDs are provided in LvLI's standard format as an ASCII, Lotus, or Excel file, or are customized to meet client requirements. These data can be transferred on diskettes; via modem to another computer system that supports Crosstalk XVI, Kermit, or Xmodem; or via the Internet.

LvLI currently provides EDDs in over 20 different formats that include Lotus and Excel spreadsheets, as well as various ASCII file formats, CLP formats, BEIDMS, PEMS, GIS Key, GEDD, WSRC AN95, IRPIMS, and Agency Standard.

KEY PERSONNEL

LvLI is proud of the quality of its personnel. Our highly trained staff of 70 experienced professionals is the key element to our laboratory's position as a leader in environmental analytical chemistry. Their degree of experience, level of commitment to quality performance, and dedication to service are second to none in the industry. A majority of our staff have a bachelor's degree or higher in chemistry, biology, environmental science, or another related field. The senior technical staff has extensive in-depth experience in environmental analyses, methods development, laboratory QA, and program management. A brief summary of the qualifications and experience of the laboratory management staff follows.

President—J. Michael Taylor has more than 25 years of experience in environmental analytical chemistry, sample collection, laboratory management, QA, methods development, and the management of large multidisciplinary environmental projects. Mr. Taylor has performed environmental surveys for industry, government, and research institutes. He has managed LvLI's Field Laboratory department and has served as laboratory manager and supervisor for site characterization and remediation programs that have required sampling and analysis of soils, sediments, groundwater, surface water, wastewater, air, and hazardous waste.

Senior Vice President—Carter P. Nulton, Ph.D. Dr. Nulton has more than 25 years of experience in laboratory and project management, environmental analytical chemistry including development, and validation and application of analytical methods utilizing GC and GC/MS techniques. In his current role, he provides project direction and technical oversight and consulting for all chemical analyses to support extent of contamination, waste characterization, and monitoring studies at sites potentially contaminated by chemical and radiochemical materials. He previously served as the Laboratory Manager for LvLI's laboratory.

Senior Project Manager—Judy Stone has more than 20 years of experience in managing environmental laboratory programs. She has managed large, complex analytical projects for many of LvLI's top clients.

Laboratory Manager/Technical Manager—Iain Daniels has more than 17 years of experience in laboratory analyses, methods development, and laboratory and project management. He is familiar with the analytical and QA/QC protocols of EPA CLP, SW-846, and Methods for Chemical Analysis of Water and Wastes. He has managed the construction and implementation of onsite laboratories.

Technical Manager/Information Sciences and Organic Chemistry—Stephen Wesson has more than 17 years of experience in environmental analytical chemistry, sample collection, fixed-base and onsite laboratory operations and management, QA, and the management of large multidisciplinary environmental projects. He previously supervised an affiliate laboratory located in California and LvLI's field laboratory department, and has served as laboratory supervisor for dedicated analytical programs requiring rapid

turnaround analysis. He is currently managing the implementation of a new state-of-the-art LIMS.

Quality Assurance Section—Carol Schrenkel is the QA Officer and has more than 16 years of experience in all areas of environmental laboratory procedures, QA, and laboratory QC for environmental analytical programs. Ms. Schrenkel is experienced in the review of EPA CLP data packages; in interactions with federal, state and local regulatory agencies; and project management. She is responsible for technical review of QAPPs, SOPs, audit reports, and data, and supervision of QA administration functions.

ONSITE/MOBILE LABORATORIES

LvLI has provided cost-effective, rapid turnaround onsite/mobile laboratories tailored to project/site-specific needs since 1985.

We have operated numerous mobile/transportable laboratories, which are set up on-site or near-site to perform mobile analytical services in support of characterization and remediation programs, soil gas surveys, stack gas compliance programs, and groundwater remediation programs. A typical laboratory is equipped with a hood, sufficient bench space to accommodate a required sample preparation, and analytical equipment necessary for the specific program. In addition to a large inventory of analytical equipment, LvLI maintains rental agreements to provide instrumentation for site-specific requirements.

LvLI professionals custom-assemble each mobile/transportable laboratory for specific campaigns. These mobile/transportable laboratories include the state-of-the-art instrumentation necessary to accomplish project-specific needs and requirements. Instrumentation used in our mobile/transportable laboratories include GCs, HPLCs, infrared spectrometers, AA/ICP instruments, and GC/MS. Typically a field laboratory capable of providing SW-846, CLP, or project tailored methods, including those for PCB's, VOA's, PAH's, Semivolatile's, metals (TAL, RCRA), hydrocarbons, explosives and wet chemistry indicator tests, can be deployed within 14 days of request.

These mobile/transportable laboratories are staffed with experienced analysts that are knowledgeable in the selection and application of appropriate analytical methods, QA/ QC criteria, reporting formats, and health and safety measures.

Analysis options for on-site testing can range from simple "screening" tests that yield results in near real-time to a full range of project dedicated analytical capabilities, which are essentially the same services as those provided by fixed base laboratories. Typically results for the latter can be available in 12-36 hours.

REPRESENTATIVE PROJECT EXPERIENCE

Client/Location/Project Title	Project Duration	Project Highlights:
Bechtel National, Inc. 800 Oak Ridge Turnpike Oak Ridge, TN FUSRAP Contract	1986–ongoing	<ul style="list-style-type: none"> ▪ Analytical services and training support to FUSRAP ▪ Mixed waste analyses ▪ Electronic deliverables ▪ Complied with rigorous QA/QC program ▪ Selected as sole chemical laboratory for Bechtel’s FUSRAP rebid team
Bechtel Jacobs Company, LLC (formerly Lockheed-Martin) Oak Ridge, TN Basic Ordering Agreement	1991–ongoing	<ul style="list-style-type: none"> ▪ Fourth consecutive task order contract ▪ Providing a wide variety of laboratory services, including environmental, industrial hygiene/health physics, dioxins and furans, POHC’s and PIC’s associated with hazardous waste incineration sampling, and mixed waste analysis ▪ Participation and “acceptable” performance in a statistical evaluation modeling program measuring data quality and timeliness
Bechtel Nevada Corporation Las Vegas, NV Nevada Test Site Subcontract	1999–ongoing	<ul style="list-style-type: none"> ▪ Organic and inorganic analyses of low-level radioactive environmental and waste samples, as well as wet chemistry and miscellaneous analyses ▪ Successfully audited by site contractor
Bechtel Hanford Inc. and Westinghouse Hanford Company	1991–ongoing	<ul style="list-style-type: none"> ▪ Analysis of radioactive environmental and waste samples ▪ Rigorous site-specific QA/QC and technical requirements ▪ Full documentation and EDD
Black and Veatch Philadelphia, PA Vineland Chemical Site	1998–1999	<ul style="list-style-type: none"> ▪ Support to design/build of treatment facility ▪ Arsenic speciation analyses ▪ Quick turnaround time for difficult matrices
Confidential DOD Contractor	1998–2000	<ul style="list-style-type: none"> ▪ Analytical support for destruction of chemical weapons and influents and effluents from test run for treatment technologies ▪ Difficult and unusual ammonia-based matrices ▪ Non-routine analyses, including aldehydes by HPLC and esters by IC
Fluor Fernald, Inc. Cincinnati, OH Fernald Environmental Management Project	1993–ongoing	<ul style="list-style-type: none"> ▪ Analyses requested under task orders for waste characterization and groundwater monitoring programs ▪ Required to demonstrate laboratory’s proficiency through participation in client-administered PE program and yearly onsite audits
Kaiser-Hill Company, LLC Golden, CO Rocky Flats Environmental Technology Site	1996–ongoing	<ul style="list-style-type: none"> ▪ Basic ordering agreement for water quality and waste characterization ▪ Analyses include TCLP, VOA, semi-VOA, metals, and wet chemistry ▪ Required to submit data reports that can be fully validated and a customized electronic data format file

Client/Location/Project Title	Project Duration	Project Highlights:
Metcalf & Eddy Baird & McGuire Onsite Laboratory	1994–1997	<ul style="list-style-type: none"> ▪ Assumed operation and management of onsite lab ▪ Pursued and received USACE validation for facility ▪ Performed interim and backup offsite analyses ▪ Staffed facility with qualified laboratory professionals ▪ Designed and implemented laboratory data management system ▪ Full range of sample analysis
NY State Department of Environmental Conservation 50 Wolf Road Albany, NY State Analytical Contract	1989–ongoing	<ul style="list-style-type: none"> ▪ Three consecutive, multi-year, state analytical contracts to support CERCLA, RCRA and NPDES programs ▪ Full documentation data packages ▪ CLP-type QA/QC ▪ Met QA/QC requirements and provided on-time deliverables 95% of the time
PA Department of Environmental Resources Harrisburg, PA State Analytical Contract	1991–ongoing	<ul style="list-style-type: none"> • Second state analytical contract • Provide analytical support for site investigations of potential Superfund sites • Analysis of water and soil samples on over 20 cases of samples (usually 15–25 samples per case) for organic and inorganic Target Compound List (TCL) parameters using current EPA CLP protocols, QC requirements, and report formats • Rapid turnaround requirements (2 to 14 day) in addition to routine 28-day turnaround • Analytical services to characterize samples of unknown matrices (e.g., drums, waste pits) to determine whether hazardous
Radian International, LLC Havertown, PA Havertown Superfund Site	1998–1999	<ul style="list-style-type: none"> • 24-hour turnaround time for select analyses • Dioxins and PCBs • Groundwater treatment and soil removal programs
Westinghouse Savannah River Co. Aiken, SC Groundwater Program	1992–ongoing	<ul style="list-style-type: none"> • Third consecutive quarterly monitoring program contract • Several hundred groundwater samples analyzed each quarter for water quality, priority pollutants, Appendix IX • Low-level radioactivity (tritium) • Electronic deliverables
SAIC	2000–ongoing	<ul style="list-style-type: none"> • Analytical support for several large DOD site programs
Commercial Nuclear Facilities (Confidential Clients)	2000–ongoing	<ul style="list-style-type: none"> • Analysis of environmental samples and wastes • Adherence to site-specific DQOs and reporting requirements
Integrated Contract Procurement Team (ICPT)	1999–ongoing	<ul style="list-style-type: none"> • Contract vehicle for 9 DOE sites • Analysis of environmental waste and mixed waste • Comprehensive list of services, deliverables, turnaround time, and site-specific project and quality requirements

Client/Location/Project Title	Project Duration	Project Highlights:
Westinghouse Savannah River Co. Aiken, SC Site-Wide Sampling & Analysis Program	1988–ongoing	<ul style="list-style-type: none"> • Third contract to support the Savannah River Plant RCRA remedial investigations • Analysis of thousands of soil samples in support of site characterization • Met QA/QC and data completeness • Analyses of radioactively contaminated samples • Reports in WSRC hardcopy and electronic diskette formats
MK Ferguson St. Charles, MO Weldon Spring Site Remedial Action Project	1995–ongoing	<ul style="list-style-type: none"> • Third consecutive multiyear contract to provide analytical laboratory services for chemical analysis of potentially radioactive water, soil, and waste samples • Data provided in both hardcopy and electronic formats • Successfully audited by client • High percentage of data delivered on time
Environmental Chemical Corporation Burlingame, CA Basic Ordering Agreement and Various Site Specific Contracts	2002–ongoing	<ul style="list-style-type: none"> • DOD sites (USACE and AFCEE) and industrial sites • Mixed waste analysis at USACE FUSRAP sites • Compliance with various site-specific QA/QC and technical requirements

CLIENT REFERENCES

Company	Contact	Telephone No.
Bechtel Nevada	Mr. Ted Redding	(702) 295-7220
Bechtel-Hanford, Inc.	Ms. Joan Kessner	(509) 375-4688
Black & Veatch	Mr. John Taylor	(215) 928-0700
BWXT of Ohio	Mr. Craig Stoll	(937) 384-4238
CH2M Hill Hanford	Mr. Rich Weiss	(509) 372-9592
Eberline Services	Mr. Mike McDougall	(865) 481-0683
Fluor Hanford, Inc.	Mr. Steve Trent	(509) 373-5869
IT	Ms. Reyna Castillo	(716) 505-8753
Kaiser-Hill Company, LLC	Ms. Kristin Schumacher	(303) 966-5014
MK-Ferguson	Mr. Randy Thompson	(314) 441-8086
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USACE Philadelphia District	Ms. Erica McCormick	(215) 656-6654
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ANALYTICAL SERVICE CAPABILITIES

LvLI offers a full range of capabilities and a large capacity to support environmental laboratory programs. Water, soil, solid, waste, and air samples are analyzed for a wide variety of organic, inorganic, and physical parameters using U.S. EPA CLP protocols, SW-846 methods, EPA 500 and 600 methods, EPA Toxic Organic (TO) methods for air, 40 CFR Part 136, and American Society for Testing and Materials (ASTM) methods. Typical compound/analyte lists include, among others, Appendix IX, Target Analyte List (TAL), Target Compound List (TCL), drinking water, Priority Pollutants, RCRA (Toxicity Characteristic Leaching Procedure [TCLP]), and universal treatment standards (UTS). Routine service capabilities are listed below.

- **Organic Chemicals**—volatile and semi-volatile (base-neutral/acids) organics, organochlorine pesticides, organophosphorous pesticides, polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), herbicides, hydrocarbon fingerprinting, fuels, gasoline, gasoline additives, diesel, explosives (nitro-aromatics, nitro-guanidine, nitroglycerine, PETN, nitrocellulose), BTEX, purgeable halogenated volatile organics, ethylene dibromide (EDB), glycols, alcohols, organic anions (acetate, formate), and dioxins/furans.
- **Metals**—mercury, trace ICP, rare earths, and arsenic species.
- **Wet Chemistry and Physical**—A full complement of gravimetric, titrimetric, and colorimetric tests; total organic carbon (TOC); total organic halides (TOX); oil and grease; automated chemical analyzer tests; anions by ion chromatography; hexavalent chromium; ignitability; density; free liquids; corrosivity; cyanide; and sulfide.
- **Radiochemistry**—A broad range of radiochemistry determinations and large capacity is available through our affiliate laboratory network, Eberline Services, Inc.
- **Ancillary Services**—field sampling, field screening, data interpretation, method development and validation, onsite laboratories, mobile laboratories, analytical specifications preparation (QA project plans, sampling and analysis plans), and data storage.

Additional tests and services are available upon request.

CONTACTS FOR MORE INFORMATION

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