

***ACZ*** **Laboratories, Inc.**

***Statement of Qualifications***

***2010***

# Statement of Qualifications

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EPA Region - State	Program	State Division
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**EPA Region 6**

<b>Arkansas</b>	CWA, RCRA	Department of Environmental Quality
<b>Oklahoma</b>	WW, RCRA, RAD	Department of Health
<b>Texas</b>	SDWA, CWA, RCRA, RAD	Texas Commission on Environmental Quality

**EPA Region 8**

<b>Colorado</b>	SDWA, RAD	Department of Health
<b>Montana</b>	SDWA-RAD	Department of Environmental Quality Cert# 0083
<b>Utah</b>	SDWA, CWA, RCRA, RAD	Department of Health Cert ID: ACZ

**EPA Region 9**

<b>Arizona</b>	SDWA, RCRA, WW, RAD	Department of Health Services Cert ID: AZ0102
<b>California</b>	RCRA, WW, SDWA-RAD	DHS: Certificate#05236CA
<b>Hawaii</b>	SDWA-RAD	Department of Health Services
<b>Nevada</b>	CWA, RAD, RCRA	Department of Environmental Protection: # CO028

**EPA Region 10**

<b>Alaska</b>	SDWA-RAD	Department of Environmental Conservation #CO28-07
<b>Oregon</b>	SDWA, CWA, RCRA, RAD	Department of Environmental Quality # CO200002
<b>Washington</b>	CWA, RCRA, RAD-SDWA	Department of Ecology: Lab Accreditation # C1240

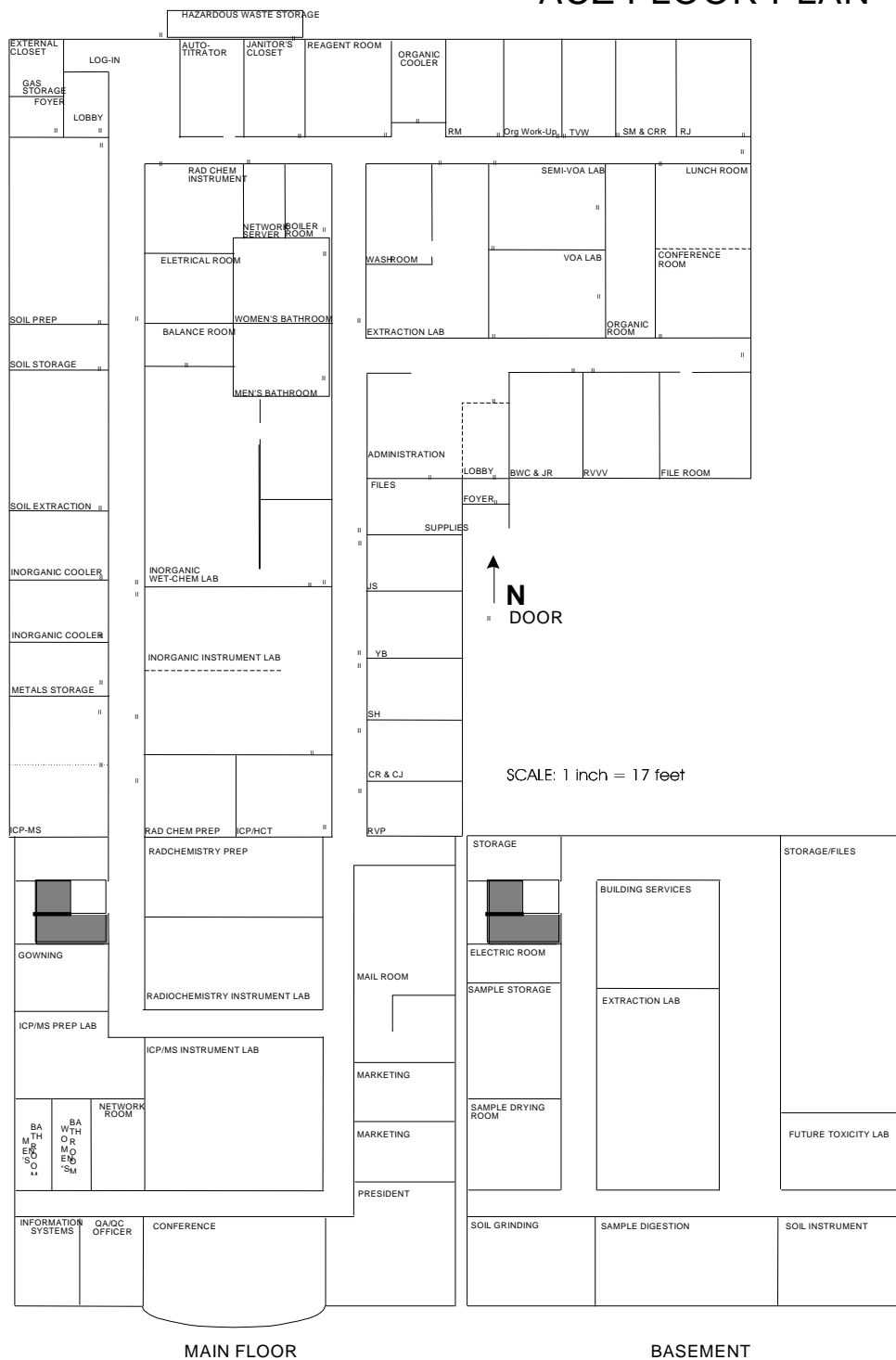
**NATIONAL**

<b>NELAC</b>	CWA, RCRA, SWDA Utah is Accrediting Authority.
<b>EPA Region 5</b>	RAD-SDWA
<b>EPA Region 8</b>	NELAC: (See Utah above)

SDWA=Safe Drinking Water Act, CWA= Clean Water Act, WW= Waste Water, HW= Hazardous Waste, RCRA= Resource Conservation & Recovery Act, RAD= Radiochemistry

2773 Downhill Drive, Steamboat Springs

# ACZ FLOOR PLAN



MAIN FLOOR

BASEMENT

**Laboratory Instruments**

***Inorganic Instrument***

#	Type	Brand & Model	Auto-sampler	Computer	Purchase Date
1	ICP	Thermal Jarrel Ash - Enviro 61 E	300 place	Thermospec Data	7/95
1	ICP	Leeman Prodigy	120 place	Dell Pentium 4	1/06
1	ICP	Leeman Prodigy	120 place	Dell Pentium 4	11/08
1	ICP/MS	Agilent 7500 C-E (Octopole Reaction Cell) Update with Collision Cell 2007	180 place	Pentium with Chem-Station	7/00
2	ICP/MS	Agilent 7500 C-E (Octopole Reaction Cell)	180 place	Pentium with Chem-Station	5/03 & 12/05
1	CVAFS	Leeman, Hydra AF Gold Plus	88 place	Pentium with WinHg	3/01
1	CVAA	Leeman, Hydra AA	88 place	Pentium with WinHg	3/02
1	Auto Hot block	Thomas Caine DEENA Automated hot block	60 place	DEENA software	11/07
2	Hot block	Environmental Express 36	36 place	n/a	
1	DMA80	Milestone DMA80 Hg solids analyzer	40 place	Milestone software	5/09
1	HPLC	HPLC linked to ICPMS5 for metals speciation	100 place	Chemstation software	3/96

***Organics***

#	Type	Brand & Model	Auto-sampler	Computer / software	Purchase Date
1	GC1	HP 5890 II	100 place	HP Enviroquant	1/90
1	GC2	HP 5890 II	Manual	HP Enviroquant	1/98
1	GC5	HP 6890	100 place	HP Enviroquant	1/98
1	GC6	HP 5890 II	OI 4552/4660	HP Enviroquant	2/87
1	GC7	HP 5890 II	OI 4552/4560	HP Enviroquant	1/02
1	GC8	HP 6890 II	100 place	HP Enviroquant	2/04
1	GC/MS C	HP 5890 II/5971	OI 4552/4560	HP Enviroquant	1/99
1	GC/MS D	HP 6890/5973	100 place	HP Enviroquant	1/99
1	GC/MS F	HP 6890/5975	OI 4552/4660	HP Enviroquant	7/06
1	GC/MS G	HP 7890/5975C	OI 4552/4660	HP Enviroquant	6/08
1	GC/MS H	HP 6890/5973N	OI 4552/4660	HP Enviroquant	1/10

***Soils***

#	Type	Brand & Model	Auto-sampler	Computer	Purchase Date
1	Microwave	CEM - Microwave Digestion System 205	12/tray	N/A	12/90
1	Sulfur / Carbon Analyzer	SC-144DR	none	none	8/99
1	Pulverizer	Bico-Braun Ceramic Plate	N/A	N/A	
2	TCLP	TCLP Rotary Extractor	10 place	none	8/87 & 5/92
1	TCLP	TCLP Rotary Extractor	12 place	none	11/08
1	Centrifuge	Baxter Scientific Megafuge	8 place	none	
1	Centrifuge	Thermoscientific centrifuge	28 place	None	
2	Crusher	Model VD Crusher	N/A	N/A	

## Laboratory Instruments

**Wet Chemistry**

#	Type	Brand & Model	Auto-sampler	Computer	Purchase Date
1	FIA	QuikChem 8000	ASX-500 360 place	Dell	5/98
1	FIA	QuikChem 8500	ASX-500 360 place	Dell	1/03
1	IC	Dionex ICS2000	AS-40	HP	10/05
1	TOC	OI Corp. 1020A TOC Analyzer	Internal - 50	Dell	2/01
1	Konelab	Discrete Analyzer, Aquakem 250	Internal	Dell	2/07
1	Cyanide Amper	Cyanide Amperometric, FIA 8000	ASX-500	Pentium	1/10
1	Autotitrator	Mantech	55 Place	Dell	9/03
1	Autotitrator	Mantech	104 Place	Dell	5/07
1	Spectrophotometer	HACH DR400V	N/A	Dell	2/95

**Radiochemistry**

#	Type	Brand & Model	Auto-sampler	Computer	Purchase Date
5	Radon flask counter	Model 182 flask counter	5 place manual	2 Model 2000 Scalers, 3 Model 1000 Scalers	11/91- 11/07
1	Survey Meter	Ludlum Measurements Model 3	N/A	N/A	2/90
1	Alpha/Beta Counter	Tennelec LB 5100 Alpha/Beta System	Auto Sampler	Eclipse Version 3.1.2	2/90
1	Alpha/Beta Counter	Tennelec XLB 5100 Alpha/Beta System	Auto Sampler	Eclipse Version 3.1.2	2/01
2	Alpha/Beta Counter	EG & G Berthold LB 770 Alpha/Beta System	10 place man.(x2)	EG&G Berthold 770 Version 2; UMS version 1.16	12/95
2	Alpha Spec.	EG & G 450 mm 2 Ultra Alpha Spectrometers (8 detectors each system)	16 detectors manual	Alpha Vision 32 Version 5.3, Maestro 32 Version 6.06	9/97
1	Gamma Spec	EG & G GMX Series GAMMA-X HPGe (High-Purity Germanium) Coaxial Photon Detector System	Manual	Gamma Vision 32 VERSION 6.01	9/97
1	Liquid Scintillation Counter	Beckman LS 6000 TA	Auto Sampler	LS 6000 Series Win Connection Suite. Version 1.1, P/N 513860	7/95

## **Computer Equipment**

### **Software and Hardware**

ACZ is constantly investing in new software applications ensuring the company can take advantage of the latest technologies available. The core server technology is a network based on both SuSE Enterprise Linux and Windows Server (2000 – 2007). Two SuSE servers run Oracle Enterprise database software, which is the platform for the ACZ LIMS (Laboratory Information Management System), one of these servers is an online backup for LIMS redundancy. 17 Windows servers perform a variety of network applications, some include real time archiving of all data that ACZ produces for the last five years, real-time backup of some instrument and office PCs, hosting acz.com, Exchange server, web proxy server, an Oracle Forms server, ACZ's intranet (Labweb), and the server based phone system. Backups of all data produced are performed nightly and backups are stored physically and electronically off-site.

Approximately 100 PCs are on the network and connect to the LIMS through an in-house developed LIMS based on MS Access 2007 or an Oracle Forms server running Labvantage Seedpak. Approximately 50 PCs run MS Office 2007. Five PCs are licensed to produce EPA CLP and CLP-like deliverables for ILM 4.2 and ILM5.3 SOWs.

Approximately 40 PCs control instruments and are tied directly into the LIMS to allow data to be directly uploaded to the ACZ LIMS. All instrument PCs and software are constantly upgraded to utilize the latest updates from instrument vendors.

All software on the ACZ network is restricted to approved applications, is monitored for compliance and is properly licensed.

ACZ Laboratories has over 28 years of experience providing analytical support to the Mining industry and has built a reputation as one of the highest quality environmental laboratories in the industry. Approximately sixty to seventy percent of our current clients are directly involved with the mining industry. We support mining operations throughout the Western United States, Central & South America, as well as Asia.

ACZ is able to support our mining clients in all areas of environmental analytical services including routine groundwater monitoring, overburden testing, acid-base accounting, kinetic testing, and bioaccumulation studies. This broad range of analytical support coupled with a staff that is highly experienced in the matrix difficulties inherent to many mining related samples makes ACZ one of the leading environmental laboratories supporting the industry.

**Types of Mining Operations Supported:**

- Gold / Silver
- Copper
- Coal
- Uranium
- Molybdenum
- Soda / Trona

**Types of Matrices Analyzed:**

- Water
- Soil
- Overburden
- Air Filters
- Sludge
- Plant Tissue
- Animal Tissue

Please contact an ACZ representative for a list of specific references from the mining industry.

**Petroleum / Petrochemical**

ACZ has 24 years of experience serving the Petroleum industry. Throughout a variety of projects ranging from long-term monitoring to short-term assessment studies, we have maintained a high level of data quality while meeting our customers' needs. We understand that quick turn-around times are inherent to the needs of the petroleum. ACZ is committed to meet our clients' expectations and project requirements.

ACZ routinely works with refineries, pipelines and UST sites on monitoring and natural attenuation, site assessments and remediation projects. In addition to identifying Hydrocarbons, PCB's or other organic contaminants ACZ is capable of providing "fingerprinting" identification fuels. We also have the capacity to handle large on-going projects requiring both organic and inorganic RCRA analyses. Our data quality and customer service combine to make ACZ a good choice for the petroleum industry.

**Types of Projects Supported:**

- Surface/Groundwater Monitoring
- Site Assessments
- UST Analyses
- Hazardous Waste Characterization

**Types of Matrices Analyzed:**

- Water
- Oil
- Soil
- Rags
- Sludge

Please contact an ACZ representative for a list of specific references from the petroleum industry.

**Biological Tissue**

ACZ has approximately 18 years of experience in analyzing biota for trace metal, radiochemical, and PCB contaminants. We have prepared and analyzed a variety of biota samples from across the world, including the Antarctic and the South Pacific. Due to the sensitivity of native organisms to many low-level man-made contaminants, ACZ protocol includes rigorous QA/QC to determine and verify our results. We supply litigation-quality data that will withstand extensive review.

Dual instrumentation in our facility enables us to accept large projects and maintain timely delivery of results. Our clean room allows us to see trace levels of metal contaminants that otherwise would not be detected. ACZ made a substantial investment in this area with the purchase of an Agilent (HP) 7500 ICP-MS and a Leeman Hydra AF Gold Plus Mercury Analyzer. As federal and state regulations get more stringent, ACZ will be capable of supporting the new, lower detection limits required for biota testing.

ACZ has performed trace metal analysis on minuscule samples using a micro-digestion and a smaller final sample volume in order to achieve very low detection limits. We are also capable of homogenizing large samples and performing analysis on a representative aliquot. Our experience and our facility set us apart in this area of environmental analysis, and we are proud to be an industry leader.

**Types of Projects Supported:**

- Radiochemical Contamination in Benthic Organisms
- Complete Bio-Accumulation Studies
- Trace Metal Analysis in Small Mammal Organs

**Types of Biota Analyzed:**

- Fish (both large and small)
- Snakes/Small Reptiles
- Insects
- Small Mammals
- Benthic Organisms
- Plants

Please contact an ACZ representative for a list of specific projects relating to biological tissue studies.

### **Leach Studies**

ACZ has over 28 years of experience in performing various leach studies. We have performed long-term humidity cell tests, upflow/downflow column leach studies, serial batch extractions and analyses, Meteoric Water Mobility Procedure (MWMP) testing, and other leachability and attenuation studies. Our technical knowledge and skills, attention to detail, and high quality data make us a dominant force in this analytical niche.

During our extensive history in the mining industry, ACZ has been a part of many interesting leach studies. We are able to implement client-specific modifications to any given variable and thus make the study more similar to each site's actual situation. Both long-term and short-term studies are valuable for making predictions about acid rock drainage, waste leachability, and the migration of hazardous ions through soil. ACZ's experienced and knowledgeable staff can assist with technical support in this area; call your ACZ representative for more details.

#### **Types of Leach Studies Performed:**

- Long-Term Humidity Cell Testing (20-40 weeks)
- Continuous Column Leaching
- Serial Batch Extraction Testing
- Meteoric Water Mobility Testing
- Toxicity Characteristic Leaching Procedure
- Synthetic Precipitation Leach Procedure
- Waste Extraction Test (California Administrative Code)

Please contact an ACZ representative for a list of specific projects relating to leach studies.

**Municipal Landfill and POTW**

ACZ has over 23 years of experience in Municipal Landfill and POTW sludge monitoring and analysis. We can analyze a wide range of parameters on a variety of matrices including drinking water, surface water, wastewater, groundwater, soil, sludge, and other biosolid material.

We have dual ICP-MS instrumentation in a clean room, which allows us to detect ppb and lower levels of heavy metals in drinking water and surface water. We also provide analytical testing services for long-term groundwater monitoring near landfills. Along with quarterly testing of influent and effluent for Wastewater Treatment Plants, we have done testing on soils for land application information and we perform routine monitoring on surface waters.

ACZ's experience in this area is broad, making us a reliable choice for any

**Types of Municipality Projects (including Landfills, POTW, WWTP):**

- Long-Term Groundwater Monitoring
- Influent/Effluent Testing
- Drinking Water Testing
- Sludge Testing
- Hazardous Waste Characterization
- Low-Level Surface Water Monitoring

Please contact an ACZ representative for a list of specific projects relating to Municipal Landfills and POTW work.

ACZ has experience with the Department of Defense (DOD) and the Department of Energy (DOE). We have worked on several different projects entailing inorganic, organic and radiochemical parameters on a variety of matrices. Full Level IV data reporting including Electronic Diskette Deliverables is available with this type of work.

**Department of Energy Experience:**

- Uranium Mine Tailings Remedial Action (UMTRA) contract lab
- Hanford Site, Groundwater / Soil investigation project (inorganic, organic, radiochemical)
- Oak Ridge – Y-12 site remediation project
- LANL site remediation Projects

**DOD, Army Experience:**

- Iowa Munitions Plant - groundwater monitoring
- Point Mugu, CA- remediation project
- Ft. Sill, OK – Hazardous Waste Characterization
- Yuma Providing Grounds - Groundwater / Soil investigation project
- USACE validation (metals and radiochemistry)
- USACE Restoration of Abandoned Mine Sites (RAMS) Western Region (multiple mine projects)

**DOD, Air Force & Navy Experience:**

- Malstrom AFB – remediation projects
- China Lake – Bio-Accumulation study

ACZ Laboratories, Inc (2010)

