

October 13, 2004

Hazardous, Toxic and Radioactive Waste
Center of Expertise

Robert Pullano
General Engineering Laboratories, LLC
2040 Savage Road
Charleston, SC 27407

Dear Mr. Pullano:

This correspondence addresses the recent evaluation of General Engineering Laboratories, LLC of Charleston, SC by the U.S. Army Corps of Engineers (USACE) for chemical and radiological analysis in support of the USACE Hazardous, Toxic and Radioactive Waste Program.

Your laboratory is now validated for the parameters listed below:

METHOD ⁽¹⁾	PARAMETERS	MATRIX ⁽²⁾
300.0/9056	Anions ⁽⁵⁾	Water ⁽³⁾
9010B/9012A	Cyanide	Water ⁽³⁾
9013/9012A	Cyanide	Solids ⁽³⁾
7196A	Chromium(VI)	Water ⁽³⁾
3060A/7196A	Chromium(VI)	Solids ⁽³⁾
8151A	Herbicides	Water ⁽³⁾
8151A	Herbicides	Solids ⁽³⁾
8321A	Explosives	Water
8321A	Explosives	Solids ⁽³⁾
413.1	Oil & Grease	Water
1664A	Oil & Grease	Water ⁽³⁾
3510C/8081A	Organochlorine Pesticides	Water ⁽³⁾
3550B/8081A	Organochlorine Pesticides	Solids ⁽³⁾
3510C/8082	Polychlorinated Biphenyls	Water ⁽³⁾
3550B/8082	Polychlorinated Biphenyls	Solids ⁽³⁾
3510C/8270C	Semivolatile Organics	Water ⁽³⁾
3550B/8270C	Semivolatile Organics	Solids ⁽³⁾
3005A/3010A/6010B/7000A	TAL Metals ⁽⁴⁾	Water ⁽³⁾
3050B/6010B/7000A	TAL Metals ⁽⁴⁾	Solids ⁽³⁾
9060	Total Organic Carbon	Water ⁽³⁾
Modified 9060	Total Organic Carbon	Solids ⁽³⁾

3510C/Mod 8015	TPH – DRO ⁽⁶⁾	Water ⁽³⁾
3550B/Mod 8015	TPH – DRO ⁽⁶⁾	Solids ⁽³⁾
5030B/5035/8260B	Volatile Organics	Water ⁽³⁾
5030B/5035/8260B	Volatile Organics	Solids ⁽³⁾
GL-RAD-A-021 Rev 9	Soil Sample Preparation for the Determination of Radionuclides	Solids ⁽⁶⁾
GL-RAD-A-021b Rev 4	Soil Sample Ashing for the Determination of Radionuclides	Solids ⁽⁶⁾
GL-RAD-A-015 Rev 6	Digestion for Soil	Solids ⁽⁶⁾
GL-RAD-A-011 Rev 12	The Isotopic Determination of Americium, Curium, Plutonium and Uranium	Water ⁽⁶⁾
GL-RAD-A-012 Rev 8	Isotopic Determination of Thorium	Water ⁽⁶⁾
GL-RAD-A-008 Rev 7	Determination of Radium-226	Water ⁽⁶⁾
GL-RAD-A-009 Rev 9	Radium-228 in Water	Water ⁽⁶⁾
GL-RAD-A-013-Rev 10	The Determination of Gamma Isotopes	Water ⁽⁶⁾
GL-RAD-A-013-Rev 10	The Determination of Gamma Isotopes	Solids ⁽⁶⁾
GL-RAD-A-028 Rev 5	Radium-226 in Drinking Water by EPA Method 903.1	Water ⁽⁶⁾
GL-RAD-A-030 Rev 8	Radium-228 in Aqueous Samples	Water ⁽⁶⁾
GL-RAD-A-038 Rev 5	Isotopic Determination of Thorium/Uranium	Water ⁽⁶⁾
GL-RAD-A-043 Rev 2	The Determination of Plutonium, Uranium and Thorium	Water ⁽⁶⁾
GL-RAD-A-045 Rev 0	The Determination of Plutonium, Uranium, Americium, Curium and Thorium	Water ⁽⁶⁾
GL-RAD-I-001 Rev 7	Gamma Spectroscopy System Operation	NA ⁽⁶⁾
GL-RAD-I-009 Rev 6	Standard Operating Procedure for Alpha Spectroscopy System	NA ⁽⁶⁾
GL-RAD-I-007 Rev 4	Ludlum Lucas Cell Counter	NA ⁽⁶⁾
GL-RAD-A-001 Rev 7	Determination of gross alpha and gross non-volatile beta in water	Water ⁽⁶⁾
GL-RAD-A-001B Rev 6	Determination of Gross Alpha and Gross Non-Volatile Beta in Soil	Solids ⁽⁶⁾

- Remarks:
- 1) Sample preparation methods have been added to reflect program policy change.
 - 2) 'Solids' includes soils, sediments, and solid waste.
 - 3) The laboratory has successfully analyzed a Proficiency Testing sample for this method/matrix.
 - 4) TAL Metals: Aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, and zinc.
 - 5) Anions: Chloride, fluoride, sulfate, nitrate, nitrite, and ortho-phosphate.

- 6) Approval for this parameter is based primarily on review of SOPs.

Enclosed for your information is a copy of the Laboratory Inspection and Evaluation Report. Your laboratory has responded to the deficiencies as noted in the report. No further responses are necessary.

Based on the successful analysis of the National Environmental Laboratory Accreditation Conference Proficiency Testing samples for the appropriate fields of testing, the results of the laboratory inspection, and your Corrective Action Report, your laboratory will be validated for sample analysis by the methods listed above. Approval for radiological parameters is based on review of the laboratory's SOPs; the results of the laboratory inspection, the Corrective Action Report, and the laboratory's analysis of Performance Evaluation samples from commercial suppliers and for the DOE Mixed Analyte Performance Evaluation Program (MAPEP) and the DOE Quality Assessment Program (QAP). The evaluation of your facility is based substantially on ISO Guide 25 (General Requirements for the Competence of Testing Laboratories) and USACE Engineering Manual (EM) 200-1-3, Appendix I (Shell for Analytical Chemistry Requirements). The period of validation is 24 months and expires on October 13, 2006.

The USACE reserves the right to conduct additional laboratory inspections or to suspend validation status for any or all of the listed parameters if deemed necessary. It should be noted that your laboratory may not subcontract USACE analytical work to any other laboratory location without the approval of this office. This laboratory validation does not guarantee the delivery of any analytical samples from a USACE Contracting Officer Representative.

Any questions or comments can be directed to Dr. Jan W. Dunker at (402) 697-2566. General questions regarding laboratory validation may be directed to the Laboratory Validation Coordinator at (402) 697-2574.

Sincerely,

Marcia C. Davies, Ph.D.
Director, USACE Hazardous,
Toxic and Radioactive Waste
Center of Expertise

Enclosure