



LEAK LOCATION SERVICES, INC.

Qualifications Statement – 2020

I. INTRODUCTION

Leak Location Services, Inc. (LLSI) is the world leader in geoelectric leak location testing. Our highly experienced and trained staff have the in-depth understanding of electrical leak location methods to successfully perform leak location services with the efficiency required to keep projects on time and within the cost proposed.

The founders of LLSI began the development of the geoelectric leak location method at Southwest Research Institute in 1980 and the first commercial leak location survey was performed in 1985. Leak Location Services, Inc. was formed in 1992 as a Texas corporation.

The technical staff of LLSI have a combined total of more than 80 years of commercial geomembrane leak location experience. LLSI has performed more than 3,745 leak location surveys and surveyed more than 580,561,500 square feet of survey. LLSI has successfully performed leak location surveys in 47 states, eight Canadian provinces, and 28 foreign countries.

In 2019, LLSI completed 118 geomembrane leak location surveys. The area surveyed was more than 30,921,500 square feet (709 acres). In the last three years, LLSI has surveyed more than 85,843,000 square feet (1,970 acres) of geomembrane. These surveys were performed in accordance with ASTM standards D6747, D7002, D7007, D7240, and D7953.

LLSI has developed, designed, and built the specialized equipment required to perform these services. LLSI leak location equipment, software, and procedures are custom designed and fabricated by LLSI employees to produce unequaled leak detection capabilities. The equipment and procedures have been improved and optimized through 27 years of field applications.

II. PERSONNEL QUALIFICATIONS

The personnel qualifications of Leak Location Services, Inc. are unmatched in the world. Five LLSI leak location supervisors have at least five years of experience and have surveyed more than four million square feet of geomembrane in the last three years. Table 1 in Section III of this document lists the leak location experience in the last three years.

LLSI holds training meetings to maximize operator proficiency and knowledge. LLSI field personnel also have received safety training for OSHA HAZWOPER, OSHA Construction Safety and Health, OSHA 30 Hour Construction Industry Outreach, MSHA work at surface mines, SafeLand USA, confined space entry, first aid, CPR and AED. In addition, LLSI subscribes to ISNetworld, PICS, PEC, Browz, and CanQual safety programs. Resumes of the LLSI personnel follow.

MATTHEW KEMNITZ

Mr. Kemnitz is the President of Leak Location Services, Inc. (LLSI). He has obtained the Engineer in Training certification, has a Bachelor of Science Degree in Mechanical Engineering from the University of Texas at Arlington, and has completed course work toward a Master's Degree in Civil Engineering. As President, Matthew Kemnitz is responsible for:

- Scheduling of projects
- Project Consulting
- Management of systems related to the delivery of LLSI's services to clients
- Ensuring business operations are efficient
- Management of payables/receivables and payroll
- Management of LLSI technicians, implementation of rewards/recognition, and coaching practices to align personnel with company goals
- Improvement of systems and equipment
- Prioritizing of company, employee, and client requirements

Mr. Kemnitz has expert knowledge of the principles and application of all leak location methods and is fluently conversant as a technical consultant to clients for potential and ongoing projects. He has been instrumental in promoting industry education of the leak location method through his technical papers and presentations at major industry events. Mr. Kemnitz has personally supervised numerous leak location surveys. Mr. Kemnitz has performed multiple ELIM (Electrical Leak Imaging and Monitoring) System data collections and surveys and is principal in updating the design of these systems.

Through his prior positions, Mr. Kemnitz developed skills in the design of large scale civil engineering projects on a variety of scales, and was involved with various elements of site design, erosion control, grading, drainage, sewer, water, storm water and franchise utilities. His skills also include preparation of feasibility studies, obtaining permits, final engineering design and site plans, and supplying accurate projections of production costs. Additionally, he interfaced with project managers, CAD technicians, city employees, and senior staff to assess client needs and devise appropriate technical solutions to meet them.

DALE KEMNITZ

Dale Kemnitz is the Operations Manager at Leak Location Services, Inc. Mr. Kemnitz joined the company in 2013 and is a business professional equipped with more than 39 years combined leadership expertise with diverse business development capabilities in environmental services, engineering support, and commercial product services. Relative to his position is his track record of building, maintaining, and cultivating business relationships, along with procuring and managing accounts. Mr. Kemnitz' business skills include enhanced operational productivity, efficiency, and improved performance of organizations through skillful application and understanding of internal business processes and environments as affected by external forces and

trends. He has first-hand knowledge of all geomembrane leak location methods with most of his experience in geomembranes covered with earth materials.

JOHN ORTIZ

John Ortiz is a Senior Project Manager and Safety Manager at LLSI. Mr. Ortiz has been employed with LLSI since 2008. Mr. Ortiz has obtained a Bachelor of Science in Civil Engineering from the University of North Dakota and is a certified MSHA safety instructor. He is also responsible for developing safety plans, implementing safety programs and conducting safety training. Mr. Ortiz is a technical expert in each geomembrane leak location survey method and provides consulting to clients for projects requiring these services. He has performed more than 285 geomembrane leak location surveys including an area of 37,550,195 square feet (861 acres). Mr. Ortiz has also installed an Electrical Leak Imaging and Monitoring (ELIM) System as well as performed several ELIM System data collections. Mr. Ortiz's responsibilities at LLSI also include developing proposals, work plans, submittals, and reports; training employees, managing projects and scheduling field technicians. In 2019, Mr. Ortiz supervised six geomembrane leak location surveys including an area of more than 1,067,500 square feet (23 acres).

MARTIN MORALES

Mr. Morales is the Field Services Manager for field applications of the geoelectric leak location method and is the Shop Manager for the construction and repair of the custom LLSI leak location equipment. He has a Bachelor of Science Degree in Electronic Engineering Technology from DeVry Institute. He began performing geomembrane leak location services in 1998. His experience includes leading crews for more than 485 geomembrane leak location projects. He was the on-site supervisor for the installation of five permanent leak monitoring systems. He is thoroughly familiar with the work, including field applications, equipment construction, troubleshooting, and maintenance. In 2019, Mr. Morales supervised 11 geomembrane leak location surveys for a total area of approximately 2,497,950 square feet of geomembrane (57 acres).

THANE HEFLEY

Mr. Hefley is a Senior Field Technician and has an Associate of Applied Science in Electronic Engineering Technology from Hallmark Institute. He started work at LLSI in 2002. He has experience in all implementations of leak location surveys. In 2019, Mr. Hefley supervised or performed 29 geomembrane leak location surveys including a total area of 9,098,220 square feet (208 acres).

PISSANU GATESUWAN

Mr. Gatesuwan is a Senior Field Technician and has an Associate Degree in Computer and Electronics Engineering Technology from ITT Technical Institute. He started work at LLSI in 2008. He is experienced in electronic equipment fabrication and in all types of leak location surveys provided by LLSI. In 2019, he performed 42 geomembrane leak location surveys including an area of 8,794,370 square feet of geomembrane (201 acres).

JAMES HAYNES

Mr. Haynes is a Field Technician and has a Bachelor of Arts in Business Management from Whitworth University. He has training in higher-level leadership and heavy aircraft maintenance

in the Air Force where he was responsible for training new employees for preflight servicing. He joined LLSI in 2015 and has performed or supervised more than 125 geomembrane leak location surveys. In 2019, he performed 26 geomembrane leak location surveys including an area of 6,112,390 square feet of geomembrane (140 acres).

III. EXPERIENCE

Table 1 shows the area surveyed, in square feet, by current LLSI field supervisors for the previous three years.

Table 1. Leak Location Supervisor Experience for the Previous Three Years (2017 - 2019)

| Survey Supervisor | Survey Type - ASTM D 7007, D7002, D7240, | | | Total (sq. ft.) |
|-------------------|--|------------|------------|-----------------|
| | Earth | Water | Bare | |
| Pissanu Gatesuwan | 5,855,332 | 3,794,100 | 9,313,208 | 18,962,640 |
| Thane Hefley | 9,933,284 | 3,994,781 | 3,578,329 | 17,506,394 |
| James Hefley | 6,642,798 | 5,297,064 | 3,641,145 | 15,581,007 |
| Martin Morales | 3,206,315 | 3,479,330 | 2,007,000 | 8,692,645 |
| John Ortiz | 2,843,175 | 1,891,062 | 70,000 | 4,804,237 |
| Total | 28,480,904 | 18,456,337 | 18,609,681 | 65,546,922 |

IV. PUBLICATIONS

LLSI founders and personnel have published more than 30 technical papers regarding leak location methods and applications over 25 years. A list of most of these publications is available and can be downloaded from the LLSI web site at www.llsi.com/publication.

V. PROJECTS

In 2019, LLSI completed 118 geomembrane leak location surveys including more than 30,921,500 square feet (709 acres) of geomembrane. LLSI also installed one ELIM system and performed one ELIM System collection. Table 2 lists the survey type, leak location operators, area, and number of leaks located for the geomembrane leak location surveys completed in 2019.

Table 2. Leak Location Surveys Completed in 2019

| Survey Type | Surveyor (s) | Area Surveyed (Sq. Ft.) | Leaks |
|--------------|-------------------|-------------------------|-------|
| Soil | Hefley, Barraza | 205,500 | 23 |
| Water Puddle | Hefley, Barraza | 152,000 | 1 |
| Soil | Hefley | 331,503 | 16 |
| Soil | Hefley, Barraza | 1,000,000 | 7 |
| Soil | Hefley, Gatesuwan | 3,726,064 | 14 |
| Water Puddle | Hefley, Gatesuwan | 293,802 | 5 |

| | | | |
|--------------|------------|-----------|-----|
| Soil | Hefley | 1,070,315 | 11 |
| Water Puddle | Hefley | 221,160 | 1 |
| Water Puddle | Barraza | 260,000 | 1 |
| Water Puddle | Barraza | 260,000 | 9 |
| Water Puddle | Gatesuwan | 135,000 | 2 |
| Spark | Gatesuwan | 260,000 | 11 |
| Spark | Gatesuwan | 260,000 | 0 |
| Spark | Gatesuwan | 135,000 | 3 |
| Soil | Morales | 141,570 | 0 |
| Soil | Morales | 158,000 | 3 |
| Soil | Gatesuwan | 280,000 | 0 |
| Water Puddle | Gatesuwan | 43,560 | 0 |
| Water Puddle | Gatesuwan | 43,560 | 3 |
| Water Puddle | Gatesuwan | 43,560 | 1 |
| Water Puddle | Gatesuwan | 43,560 | 1 |
| Water Puddle | Gatesuwan | 43,560 | 1 |
| Water Puddle | Gatesuwan, | 43,560 | 2 |
| Water Puddle | Gatesuwan | 43,560 | 4 |
| Water Puddle | Gatesuwan | 43,560 | 1 |
| Water Puddle | Gatesuwan | 43,560 | 4 |
| Water Puddle | Gatesuwan | 43,560 | 3 |
| Soil | Gatesuwan | 440,000 | 1 |
| Soil | Morales | 262,000 | 4 |
| Water Puddle | Morales | 197,500 | 1 |
| Water Puddle | Hefley | 197,500 | 1 |
| Soil | Haynes | 50,000 | 2 |
| Soil | Haynes | 50,000 | 1 |
| Soil | Haynes | 100,000 | 4 |
| ELIM | Morales | 796,500 | 0 |
| Soil | Morales | 796,500 | 12 |
| Soil | Haynes | 300,500 | 6 |
| Water Puddle | Gatesuwan | 711,500 | 126 |
| Water Puddle | Gatesuwan | 611,000 | 6 |
| Water Puddle | Gatesuwan | 40,000 | 0 |
| Deep Water | Ortiz | 321,840 | 4 |
| Soil | Gatesuwan | 260,000 | 0 |
| Deep Water | Hefley | 70,000 | 1 |
| Soil | Hefley | 304,500 | 0 |
| Water Puddle | Haynes | 390,000 | 1 |
| Soil | Haynes | 647,000 | 1 |
| Water Puddle | Morales | 390,000 | 0 |



| | | | |
|---------------|-------------------|---------|----|
| Soil | Morales | 390,000 | 1 |
| Shallow Water | Barraza | 4,500 | 1 |
| Water Puddle | Gatesuwan | 22,000 | 5 |
| Shallow Water | Barraza | 43,500 | 1 |
| Shallow Water | Barraza | 43,500 | 4 |
| Deep Water | Barraza | 115,600 | 1 |
| Deep Water | Barraza | 60,000 | 0 |
| Soil | Gatesuwan | 239,000 | 4 |
| Soil | Gatesuwan | 239,000 | 1 |
| Deep Water | Hefley | 55,000 | 0 |
| Deep Water | Hefley | 310,000 | 3 |
| Water Puddle | Gatesuwan | 450,500 | 1 |
| Deep Water | Haynes, Barraza | 8,000 | 0 |
| Deep Water | Haynes, Barraza | 12,000 | 0 |
| Deep Water | Haynes, Barraza | 25,000 | 0 |
| Water Puddle | Gatesuwan | 15,000 | 0 |
| Shallow Water | Gatesuwan | 15,000 | 38 |
| Water Puddle | Haynes | 168,000 | 3 |
| Soil | Haynes | 187,000 | 4 |
| Water Puddle | Hefley | 127,000 | 2 |
| Water Puddle | M. Kemnitz | 4,000 | 6 |
| Deep Water | Haynes | 53,000 | 3 |
| Deep Water | Hefley | 53,000 | 1 |
| Deep Water | Ortiz | 51,000 | 2 |
| Deep Water | Hefley | 90,000 | 3 |
| Deep Water | Hefley | 161,000 | 1 |
| Shallow Water | Barraza | 4,500 | 1 |
| Soil | Hefley | 325,580 | 7 |
| Deep Water | Morales | 41,000 | 6 |
| Deep Water | Haynes | 46,500 | 4 |
| Deep Water | Ortiz | 100,000 | 0 |
| Soil | Ortiz | 116,000 | 2 |
| Water Puddle | Hefley | 140,000 | 1 |
| Deep Water | Hefley | 190,000 | 5 |
| Water Puddle | Gatesuwan | 154,000 | 2 |
| Deep Water | Hefley | 43,500 | 5 |
| Water Puddle | Hefley, Gatesuwan | 725,000 | 11 |
| Water Puddle | Hefley | 582,000 | 7 |
| Soil | Hefley, Haynes | 653,400 | 2 |
| Soil | Haynes | 653,400 | 1 |
| Water Puddle | Haynes | 180,000 | 0 |



| | | | |
|-----------------|-------------------|-----------|-----|
| Deep Water | Haynes | 261,370 | 6 |
| Deep Water | Haynes, Barraza | 1,684,000 | 25 |
| Deep Water | Barraza | 60,000 | 0 |
| Water Puddle | Haynes | 40,000 | 0 |
| Soil | Gatesuwan | 107,600 | 3 |
| Deep Water | Gatesuwan | 385,200 | 2 |
| Soil | Morales | 41,380 | 0 |
| Soil | Ortiz | 68,700 | 1 |
| Soil | Morales | 225,000 | 1 |
| Shallow Water | Haynes | 266,400 | 1 |
| Water Puddle | Morales | 80,000 | 2 |
| Water Puddle | Haynes | 80,000 | 2 |
| Water Puddle | Haynes | 304,920 | 0 |
| Water Puddle | Gatesuwan | 261,360 | 1 |
| Water Puddle | Gatesuwan | 261,360 | 0 |
| Water Puddle | Gatesuwan | 52,680 | 0 |
| Soil | Gatesuwan | 192,480 | 0 |
| Water Puddle | Gatesuwan | 52,680 | 0 |
| Soil | Hefley, Haynes | 609,840 | 0 |
| Soil | Gatesuwan | 130,680 | 0 |
| Soil | Hefley | 234,000 | 0 |
| Soil | Haynes | 330,200 | 0 |
| Soil | Hefley, Gatesuwan | 450,000 | 1 |
| Water Puddle | Gatesuwan | 20,000 | 0 |
| Soil | Ortiz | 185,000 | 2 |
| ELIM Collection | Morales | 392,040 | 0 |
| Shallow Water | M. Kemnitz | 12,500 | 1 |
| Shallow Water | M. Kemnitz | 12,500 | 8 |
| Deep Water | Gatesuwan | 17,500 | 0 |
| Water Puddle | Hefley, Haynes | 851,935 | 126 |
| Water Puddle | Hefley, Haynes | 470,400 | 23 |
| Deep Water | Gatesuwan | 12,800 | 0 |

