LEAK LOCATION SERVICES, INC.

16124 UNIVERSITY OAK • SAN ANTONIO, TEXAS 78249 • (210) 408-1241 / FAX (210) 408-1242

October 26, 2009

35

Brieser Construction Company
24101 S. Municipal Drive
Channahon, IL 60410

Attention: Mr. Tedd Mills

Email: tmills@brieserconstruction.com

Subject: Report for "Geomembrane Leak Location Survey of No. 3 Ash Pond Liner Replacement Located at the Midwest Generation Station in Romeoville, Illinois"; LLSI Project 1166

Dear Mr. Mills:

On October 22nd of 2009, Martin Morales of Leak Location Services, Inc. (LLSI) conducted a leak location survey on the geomembrane replacement liner for No. 3 Ash Pond located at the Midwest Generation Station in Romeoville, Illinois. The area of the ash pond was approximately 70,000 square feet. The pond was lined with a single 60-mil geomembrane liner over a 16-oz non-woven geotextile. The geomembrane was covered with 12-oz non-woven geotextile, 12-inch cushion layer and 6-inch warning layer. This report documents the results of the survey.

I. SURVEY RESULTS

No leaks were found in the geomembrane replacement liner for No. 3 Ash Pond. The leak location equipment was tested for sensitivity and proper operation. This procedure was conducted to verify equipment functionality. For a soil-covered survey, a 6-millimeter diameter artificial leak was buried in the soil and leak location survey lines were run along both sides of the artificial leak. Leak location survey measurements were collected to determine the maximum distance that the simulated leak could be reliably detected. This detection distance was approximately 7.5 feet. Figure 1 shows the artificial leak test verifying proper equipment functionality and leak detection sensitivity.

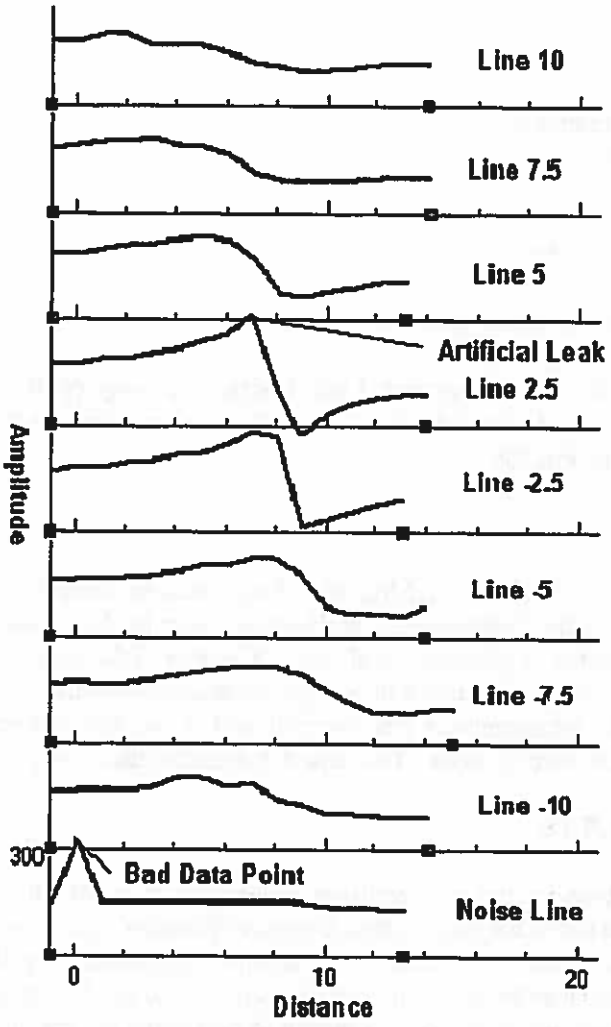

FIGURE 1. GRAPH OF ARTIFICIAL LEAK TEST AT NO.3 ASH POND

II. TECHNIQUE

A. Principles of the Electrical Leak Location Method

The principle of the electrical survey method for geomembrane liners is to impress a high DC voltage across the liner and measure the resulting potential gradients on or in the conducting material on the liner. If any holes are present, characteristic anomalies in the potential measurements caused by electrical current flowing through the holes indicate their location.

B. Soil-Covered Survey

A high voltage isolated DC power supply was used to impress a voltage across the liner using one electrode placed in the operations layer located on top of the primary liner and a second electrode placed in the electrically conducting material located beneath the liner. Therefore, the geomembrane liner provides an electrical barrier between the electrodes except where there are holes in the geomembrane liner. Electrical current flowing through the holes in the geomembrane liner produces localized anomalous areas of high current density near the holes. This electrical current path is provided by electrically conducting material such as water, sand, or soil.

The survey of the cell was conducted by making potential gradient measurements on the moist gravel with measurement electrodes spaced approximately 3 feet apart. These measurements were made approximately every 3 feet along numbered survey lines that were spaced approximately 5 feet apart. A portable digital data logger was used to collect the data. The data was then downloaded into a portable computer for display, plotting, and analysis.

If there are any questions regarding the electrical survey or this report, please contact us at (210) 408-1241. We appreciate the opportunity to have been of service to Brieser Construction Company.

Very truly yours,

Harvey Moy
Graduate Engineer

Approved by:

Glenn T. Darilek
Principle Engineer