

September 28, 2019

Mike Lanenga  
SET Environmental  
450 Sumac Road  
Wheeling, Illinois 60090

RE: Thorium Monitoring: 112 E. Lower Wacker Dr. (Chicago Riverwalk 2FM)  
Digger #600715726

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the performance of 3 borings for the installation of gate fence posts along the Chicago Riverwalk at 112 E. Lower Wacker Dr. in Chicago, Illinois. The monitoring was performed by Aaron Morris (RSSI), Health Physicist, on September 23, 2019. All activities were conducted under the guidance of document *SET General Procedure for Thorium Monitoring*.

#### Instrumentation

Surface gamma scans were performed using a Ludlum Model 2221 Scaler / Ratemeter (serial no. 126497) with attached Ludlum Model 44-10 2"x2" NaI detector (w/ 6" collimated lead shield). The instrument was calibrated on October 15, 2018. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,319 counts per minute (cpm).

The background count rate for this location was found to average 1,239 cpm.

#### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey data was by monitoring the bore holes at 1-foot intervals to a maximum depth of 3.0 feet below ground surface. All spoils generated during the boring process were also monitored.

The maximum gamma count rate for each boring interval was recorded on the attached Radiation Survey Form. The count rates of the core samples ranged from 1,500 cpm to 2,700 cpm. No count rates were found at any time that exceeded the threshold limit of 6,319 cpm.

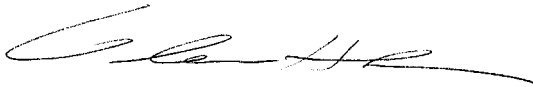
Additional Monitoring

Since no count rates were identified above the 7.1 pCi/gram threshold limit, no additional soil sampling, air monitoring, or personnel monitoring were performed.

I will be providing a copy of this report to both the City of Chicago Department of Public Health and US Environmental Protection Agency, as required.

Thank you for your assistance with this project. If you have any questions or need additional information, please call me at (815) 485-6161.

Sincerely,  
Stan A. Huber Consultants, Inc.

A handwritten signature in black ink, appearing to read "Glenn Huber", written in a cursive style.

Glenn Huber, CHP  
President

## Radiation Survey Form

**Location/ Project ID:** 112 E. Lower Wacker Dr. - 2FM Riverwalk (DIGGER#600715726)

**Date:** 9/23/19

**Technician:** Aaron Morris (RSSI)

**Inst Model:** Ludlum 2221

**Serial No. :** 126497

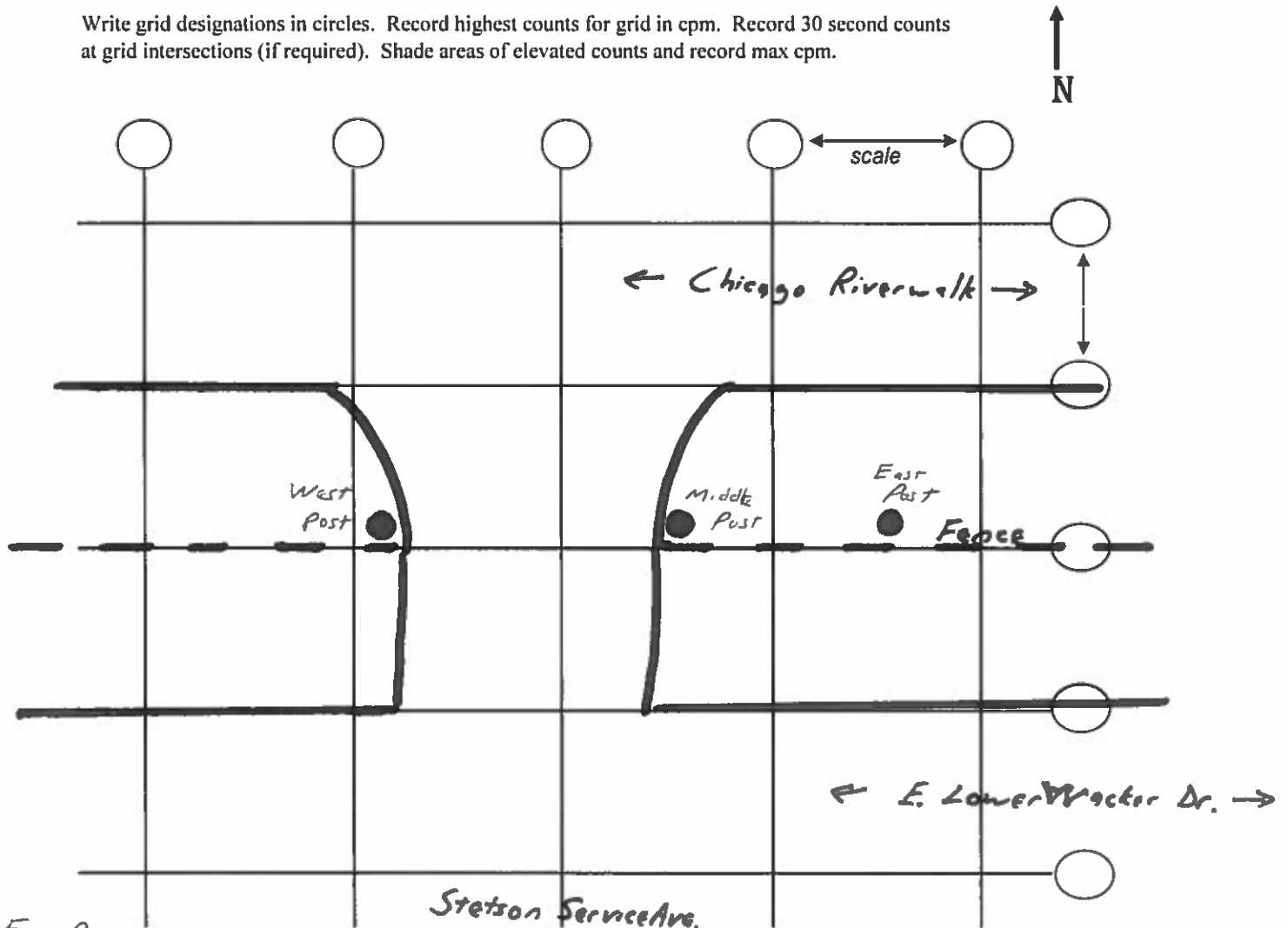
**Probe Type:** 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

**Lift Elevation:** surface to -36"

**Background** 1,239 cpm

**Action Level:** 6,319 cpm

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.



East Post	cpm
-1'	1600
-2'	1500
-3'	2500
spoils	1900

Middle Post	cpm
-1'	N/A
-2'	2400
-3'	2700
spoils	1700

West Post	cpm
-1'	1800
-2'	N/A Brick
-3'	N/A Brick
spoils	1800

