



December 11, 2018

Mike Lanenga
SET Environmental
450 Sumac Road
Wheeling, Illinois 60090

RE: 200 E. Riverwalk Thorium Monitoring 12/3/18-12/4/18 (2FM)

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the drilling of 4 borings for traffic bollards and a gate at 200 E. Riverwalk in Chicago, Illinois. The monitoring was performed by Jeremy Kieser, SAHCI Health Physicist, on December 3 – December 4, 2018. 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 probe (w/ 6" collimated lead shield). The instrument was calibrated on October 15, 2018. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,319 counts per minute (cpm).

The average background count rate for this location was determined to be 2,930 cpm.

Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Surface gamma scans were performed on the spoils of each post hole that were generated throughout the boring process.

The maximum gamma count rate for each 3-foot boring was recorded on the attached Radiation Survey Form. The count rates of the boring spoils ranged from 2,000 cpm to 3,000 cpm. No count rates were found at any time that exceeded the instrument specific threshold limits 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.

Regulatory Notification of Survey Completion

I will be providing a copy of this report to both the City of Chicago Department of Public Health and USEPA, 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 'G. Huber', with a long horizontal flourish extending to the right.

Glenn Huber, CHP
President

Radiation Survey Form

Location/ Project ID:

Date: 12/3/2018

Technician: Jeremy Kieser

Inst Model: Ludlum 2221

Serial No.: 126497

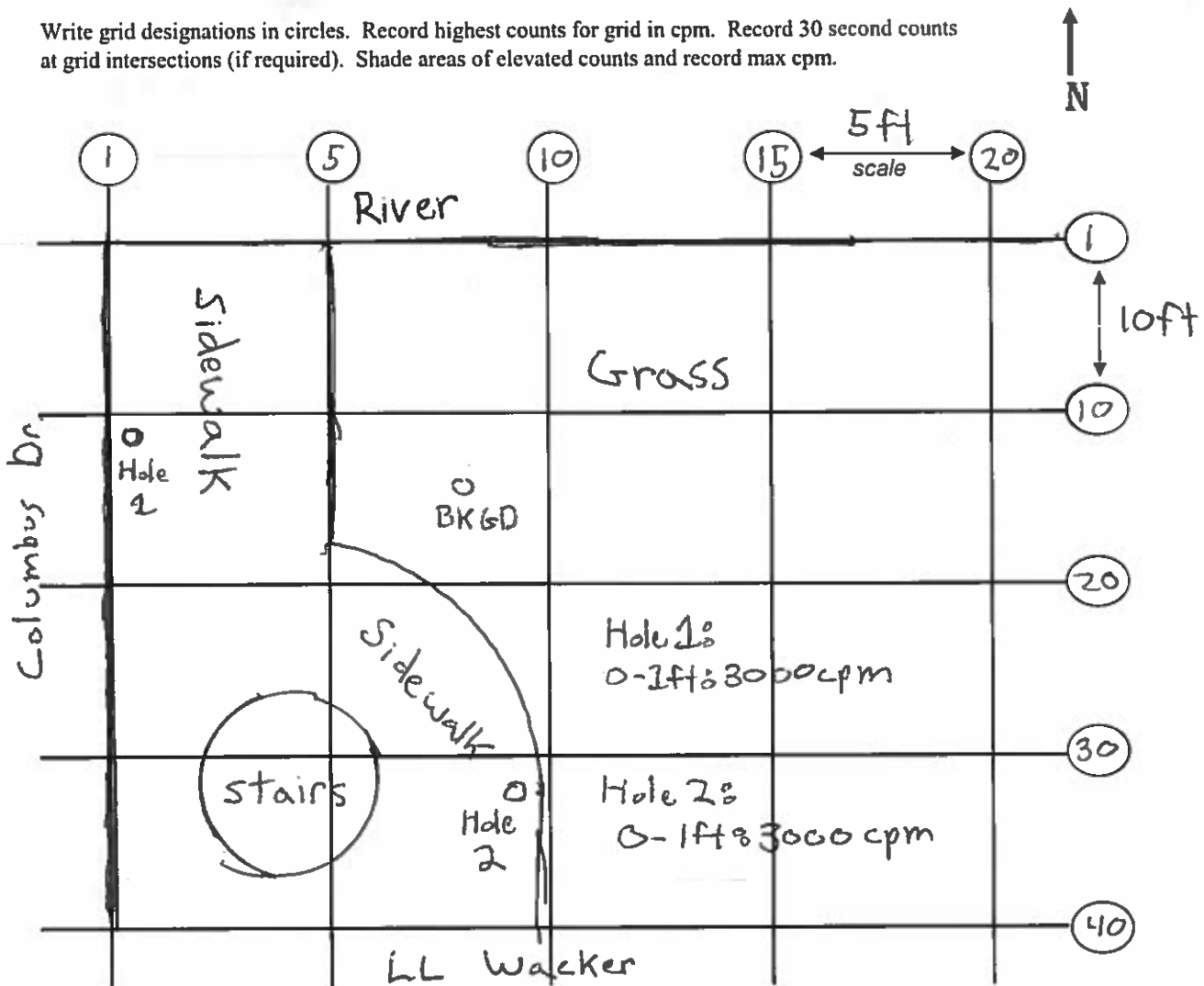
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation: Surface to 3ft

Background 2930 cpm

Action Level: 6319 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.



Radiation Survey Form

Location/ Project ID:

Date: 12/3/2018

Technician: Jeremy Kieser

Inst Model: Ludlum 2221

Serial No.: 126497

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

Lift Elevation: Surface to 3ft

Background 1814 cpm

Action Level: 6319 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.

