



June 27, 2020

Mike Lanenga
SET Environmental
450 Sumac Road
Wheeling, Illinois 60090

RE: Thorium Monitoring – City of Chicago Department of Water Management
CDOT Permits: 1257617 – 220 E. Sub Lower Wacker Dr.
1257586 – 300 E. Sub Lower Wacker Dr.

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation for repair of two storm sewer catch basins at 220 and 300 E. Sub-Lower Wacker Drive in Chicago, Illinois. The monitoring was performed by Aaron Morris, RSSI Health Physicist, on June 25, 2020. 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 18, 2019. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,179 counts per minute (cpm).

The average background count rate for these locations was measured at 1,355 cpm.

Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey data was collected by entering the excavations surrounding catch basins and recording the highest count rate for the floor and walls to a maximum depth of 18 inches below ground surface. All asphalt, concrete, and soil were loaded directly into a truck for disposal.

The maximum gamma count rate for each lift was recorded on the attached Radiation Survey Form. The count rates in the excavations ranged from 1,500 cpm to 2,000 cpm. No count rates were found at any time that exceeded the threshold limit of 6,179 cpm.

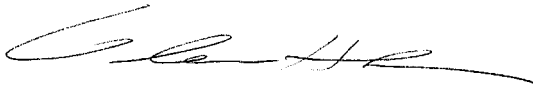
Additional Monitoring

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 'G. Huber', with a long horizontal flourish extending to the right.

Glenn Huber, CHP
President

Radiation Survey Form

Location/ Project ID: 220 & 300 E. Sub Lower Wacker Dr.

CDOT #1257617 / 1257586

Date: 6/25/20

Technician: Aaron Morris (RSSI)

Inst Model: Ludlum 2221

Serial No. : 126497

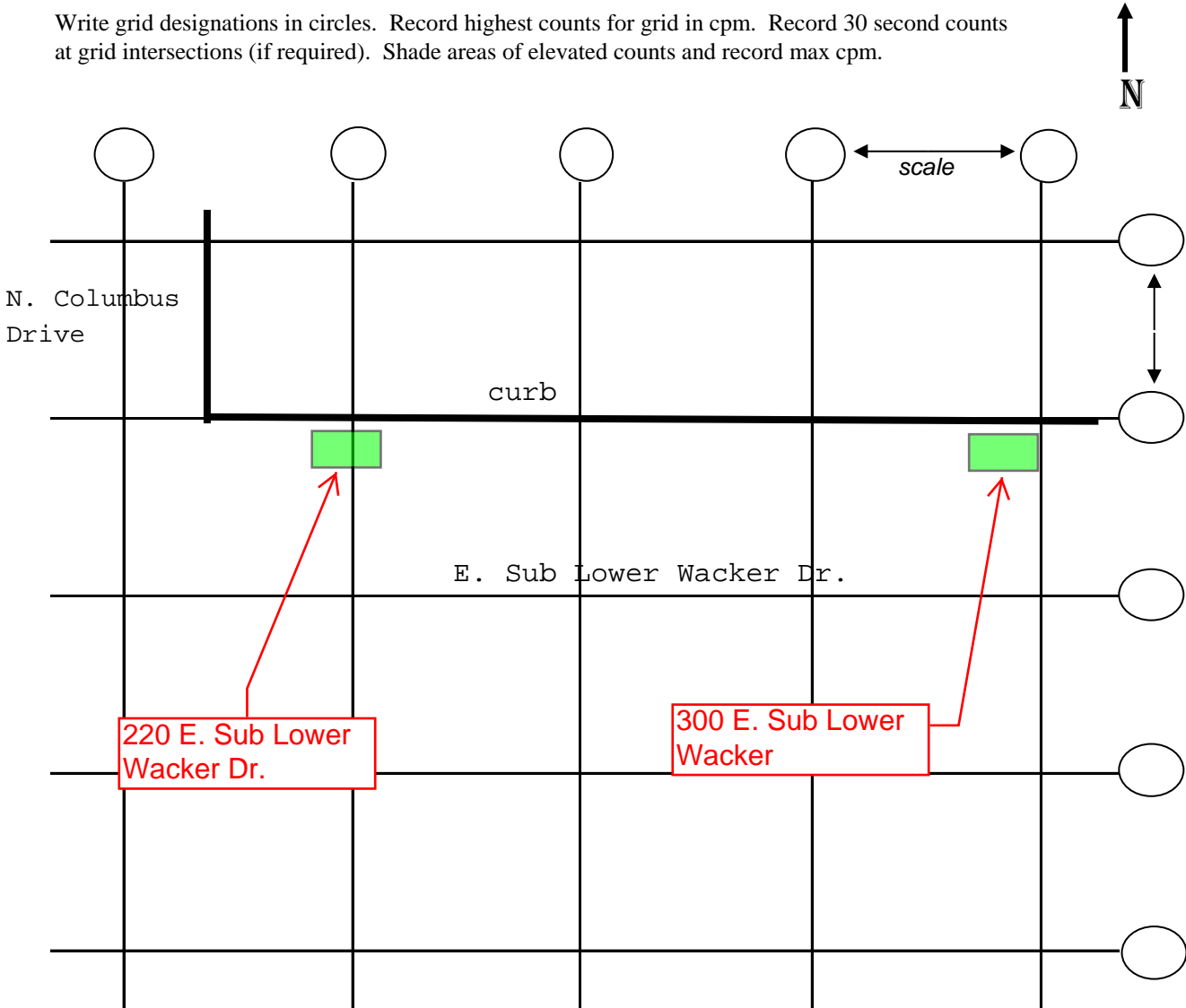
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation: surface -> bgs

Background 1,355 cpm

Action Level: 6,179 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.



Note: Survey Form created by Glenn Huber on 7/2/20 from data provided by Aaron Morris, RSSI. See attached photos and raw data. GAH



300 E. Sub Lower Wacker Dr.

Sub Slab = 1,577 cpm

After Removal = 1,815 cpm



200 E. Sub Lower Wacker Dr.

Sub Slab = 1,900 cpm

After Removal = 1,511 cpm

* Data and photos from email sent from Aaron Morris to Glenn Huber on 6/25/20